



45th AOMSI Conference

© The Association of Oral and Maxillofacial Surgeons of India 2022

Ginwala Award Paper

Clinical Application of Activated 3D Constructs with Dental Pulp Stem Cells for Cartilage Regeneration in New Zealand Rabbits Animal Models: The Guiding Force for Future Gingyloarthroidal Joint

Lakshmi Shetty

Abstract

The regeneration of cartilage of the gingyloarthroidal joint has been the field of intriguing research. The dental pulp stem cells have been a rich source of chondrogenic activity if activated and applied at the bed for regeneration. The human application of the above as translational research will be positive after successful animal models.

Research Aim/Objectives

This study was to evaluate the chondrogenic activity of the 3D constructs in New Zealand Rabbit animal Models.

Methods

This prospective, single center study involved 30 animal models belonging to species *Oryctolagus cuniculus*. They were divided into two groups (test site/control site). The activated cells packed in 3D constructs was placed in the surgical site of stifle joint with specific dimensions.

Results

There have been considerable significant results seen in the test sites after 90 days. The chondrogenic activity in the animal models was evaluated.

Conclusions

The joint of the animal model showing excellent results towards chondrogenic activity will be the reason for a paradigm shift and guiding light for translational research in Gingyloarthroidal joint regeneration.

References

1. Mata M, Milian L, Oliver M, Zurriaga J., et al. In vivo articular cartilage regeneration using human dental pulp stem cells cultured in an alginate scaffold: a preliminary study. *Stem Cells Int.* 2017;8,309,256:1–9.

2. Lee JW, Kim YH, Kim SH, HanSH, Hahn SB. Chondrogenic differentiation of mesenchymal stem cells and its clinical applications. *Yonsei Med. J.* 2004;45:41–7.

Category: Cleft and Craniofacial Anomalies

S. No. 1

Active Molding of Cleft Nasal Cartilage in UCLP Using Simple Segmented NAM2014A Surgeon's Perspective

Dr. Namitha Mysore Hiriyanna

ABMSS, Mysore Centre

Abstract

Nasal morphology remodeling by nasoalveolar moulding (NAM) before primary lip repair gives better post-surgery outcomes. However, traditional NAM has high technical sensitivity, steep learning curve, the frequent need of modifications, and interruption in lifting force of nasal cartilage during oral movements, thereby reducing overall efficacy of the device. In order to eliminate interaction and interdependency of nasal bulb with alveolar molding plate, we propose segmenting NAM (SNAM) into nasolabial complex moulding (NCM) and alveolar complex molding (ACM). NCM addresses ala septum, lip premaxilla via nasal hook and lip taping. ACM addresses palate alveolus via Yen modified feeding plate. When the hook is suspended by elastic traction, nasal complex undergoes a natural rotation, where cleft side ala lifts and septum medializes. Lip taping and feeding plate augment positive molding of cleft segments and maintain transverse relation. The current study outlines SNAM treatment strategy and assesses the effect on nasal deformity.

Methods

A retrospective evaluation was done on 20 UCLP patients who underwent SNAM. Standardized basilar views, pre, and post SNAM therapy were evaluated for nostril height, nostril width as a ratio of cleft to noncleft side along with columellar deviation angle. At 1 year postoperatively, 20 UCLP patients having undergone lip repair without NAM were matched and parameters of nasal form, nasal

symmetry, and vermillion border were scored by a blinded observer and compared between SNAM and no NAM groups.

Results/Findings

SNAM resulted in significantly improved nostril symmetry with no complications observed. Nostril height ratio increased from 0.35 ± 0.10 to 0.78 ± 0.17 . Nostril width ratio decreased from 3.14 ± 0.66 to 2.18 ± 0.42 . Columellar deviation angle expanded from $26.5^\circ \pm 6.30^\circ$ to $58.5^\circ \pm 9.88^\circ$. The result was sustained at 1 year postoperatively and showed improved scores compared to no NAM group.

Conclusion

Dynamic correction of the nasal deformity is possible through SNAM therapy.

S. No. 2

Osteotomy Assisted Repair of Bilateral Cleft Lip with Severely Protruding Premaxilla

Dr. Jaideep Singh Chauhan

CHL Hospital

Abstract

The cases of bilateral cleft lip with severely protruding premaxilla has always been challenging in terms of achieving satisfactory closure if the pre-surgical orthodontic treatment could not be delivered or help improving the premaxillary orientation. In such cases premaxillary/vomerine osteotomy should be taken into consideration to set the premaxilla in a favourable position to achieve tensionless lip closure.^{1,2}

Objectives

The aim of this paper is to document the outcomes of premaxillary and/or vomerine osteotomy assisted cheilorhinoplasty and the potential complications associated with it.

Methods

The patients of bilateral cleft lip with having minimum premaxillary protrusion of 10 mm were selected for this procedure. The patients with history of successful pre-surgical orthodontic treatment were excluded from the study. From November 2016 to June 2021, a total number of 36 patients, aged 4–62 months, with having mean age of 9 months underwent these procedures. Out of 36 patients, 30 underwent 'Premaxillary' osteotomy and rest 6 had 'Vomerine' osteotomy. The osteotomy was followed by cheilorhinoplasty in same stage.

Results

Follow up period ranged from 4 months to 5 years. All the patients had satisfactory aesthetic outcome of lip and nose. None of the patient showed any significant complications.

Conclusion

Primary cheilorhinoplasty followed by premaxillary/vomerine osteotomy is a safe procedure to repair the bilateral cleft lip with excessive protrusion of premaxilla. Regular follow-up should be done to assess the growth of midface and if needed corrective orthodontic and/or surgical treatment should be in a later age.

References

1. Murthy J: Primary bilateral cleft lip repair with management of premaxilla without preoperative orthopedics. *J Craniofac Surg* 20: 171920131722, 2009
2. Vyas RM, Kim DC, Padwa BL: Primary premaxillary setback and repair of bilateral complete cleft lip: indications, technique, and outcomes. *Cleft Palate Craniofac J* 53: 302–308, 2016

S. No. 3

Recurrent Oroantral Fistula Secondary to Cleft Palate in Adults: A Reconstructive Challenge

Dr. Maj. Lalit Janjani

Armed Forces Dental Clinic

Abstract

Oro-antral fistula is probably the most common complication associated with cleft palate surgery. Closure of a large defect poses a challenge for the reconstructive surgeon. Posteriorly based double buccinator myomucosal flap is an optimal choice for closure of large defects. With a case, details of surgical technique and effectiveness of this method are presented.

S. No. 4

Role of Buccal Mucosal Flap in Cleft Palatal Fistula

Dr. Arun Murali

P. M. Nadagouda Memorial Dental College and Hospital, Bagalkot

Abstract

Introduction

Palatal fistulae after reconstructive cleft palate surgery are a problem for patients and surgeons. The scarred tissues, the absence of local virgin tissues and high rates of recurrence have forced surgeons to consider corrections only for symptomatic patients. Various methods have been used, but most of them are inadequate unpredictable and hazardous. The role of buccal mucosal flap (BMF) needs to be assessed in cleft palate fistulae.

Aim and Objective

It is to evaluate the outcome of BMF in the repair of cleft palatal fistulae.

Methodology

Prospective studies on patients with cleft palatal fistulae who reported to our centre between 2016 and 2019 and required surgical intervention were involved.

Result

Out of 20 patients operated for palatal fistulae using BMF, 14 of them had combined anterior and mid-palatal fistula, 4 had mid-palatal fistula only. Mean size of defect was $12 \text{ mm} \times 17 \text{ mm}$ and the mean size of flap was $18 \text{ mm} \times 24 \text{ mm}$. One patient showed partial flap necrosis and dehiscence was noted in two.

Conclusion

Buccal mucosal flap is an effective technique in treating palatal fistula thus obviating the need for distal tissue harvest.

Keywords Buccal mucosal flap, Cleft palate, Fistula, Speech

Reference

1. Bayani B. Buccinator myomucosal flap in cleft palate repair: Revisited: *J of Cleft Lip Palate Craniofac Anomal*. 2014; 1:11–16.

S. No. 5**Speech Following LeFort I Maxillary Advancement in Cleft Maxillary Hypoplasia: A Prospective, Objective and Subjective Outcome Analysis**

Dr. Shibani Abhay Nerurkar, Dr. Pramod Subash

Nair Hospital Dental College

Abstract**Background**

LeFort I advancement in management of maxillary hypoplasia is controversial and considered to have detrimental effect on speech in cleft patients by increasing the velopharyngeal incompetence. Literature lacks objective evidence which combined with feared potential for worsening of speech after maxillary advancement forces surgeons to restrict the maxillary advancement thus limiting the possibility of best aesthetic correction achievable.

Aim

To objectively evaluate the effect of maxillary advancement on speech and VPI using video-fluoroscopy (VFS), direct nasal-endoscopy (DNE) and speech evaluation and subjectively assess patients and their peer's perception regarding outcome.

Material and Methods

29 patients who underwent Lefort I maxillary advancement of an average 11 mm were included. VFS in lateral view, DNE and speech recordings were performed pre and 6 months post-operatively. VFS assessed the relative position of velum in relation to the pharyngeal wall, speech was evaluated for changes in emission, resonance and articulation, endoscopy to assess overall function of velopharyngeal valve. Subjective speech evaluation was done with a Patient Reported Outcome Measure [PROM] questionnaire.

Results

VFS measured mean increase in velo-pharyngeal distance of only 1.73 mm and insignificant velar closure values [$p > 0.05$]. The statistically significant increase in velar length [6%], decrease in velar width [12%] and increase in Passavant's ridge activity [30%] was recorded. Bilabial, dental and labiodental articulation statistically improved [$p < 0.05$] after surgery. No patient reported worsening and 90% patients reported improvement in overall speech in PROM.

Conclusion

The primary cause for functional impairment and poor aesthetics in cleft deformity is the maxillary hypoplasia and therefore, should be the focus during correction. This study has established that maxilla can be advanced without significant change in VP function, instead causes improvement in overall speech.

S. No. 6**Incidence and Prevalence of Oral Candidal Colonization in Patients with Cleft Lip and Palate**

Prof. Dr. Imran Khan

Jamia Millia Islamia

Abstract**Aims and Objectives**

The primary aim of this study is to assess the incidence and rate of oral candidal colonization in patients of cleft lip and cleft palate (CLCP) in comparison to healthy individuals. Assessment of candidal subspecies and factors which may affect the incidence and rate of

colonization such as type of cleft lip/palate (CLCP), age of the patient, number of surgeries undergone gender and oral health status is also to be done.

Material and Methods

A prospective study of 50 patients with cleft and 50 control subjects was planned. Oral health was assessed using the gingival, plaque, and decayed, missing, and filled (DMFT) indexes. A culture swab was obtained from the tongue, buccal and palatal mucosa. *Candida albicans* and other *Candida* species were identified using the chromogenic differential media.

Results

The prevalence rate of *Candida* in patients with cleft (82.1%) was significantly higher than in healthy control subjects (26.3%). The most commonly detected species was *C. albicans* (56%) followed by *C. parapsilosis* (10%) *C. dubliniensis* (10%) *C. krusei* (6%) and *C. utilis* (4%). The colonization rate of *Candida* and the distribution of *C. albicans* varied with age but were not significantly associated with gender in patients with cleft and healthy controls. The candidal colonization rate was highest in patients with cleft who had more than 2 surgeries (87.5%), followed by those with 2 surgeries (73.33%). Oral Health status of the study group (CLP) was significantly poorer as compared to controls.

Conclusion

Though largely asymptomatic, incidence and prevalence of *Candida* species were significantly higher in CLP patients as compared to healthy controls.

S. No. 7**Factors Influencing the Aesthetic Outcome of Vermilion Zone in Unilateral Cleft Lip Repair**

Dr. Srikanth Gunturu

DRS S&NR SIDS, Gannavaram

Abstract**Background**

All the subunits of the lip need diligent consideration, of which the vermilion zone plays a pivotal role for the restoration of both form and function along with good aesthetic outcome in unilateral cleft lip repair.

Aim

To evaluate the factors influencing the aesthetic outcome of vermilion zone in unilateral cleft lip repair.

Methods

A study was conducted among 50 unilateral cleft lip and palate patients who underwent surgical repair by modified Millard's technique. Photographic evaluation was done both preoperatively and postoperatively. Anthropometric components were used to assess symmetry of Cupid's bow, area of dry vermilion and wet vermilion. The factors influencing the outcome of vermilion aesthetics are analysed.

Results

Patients were grouped into class I, class II, class III and class IV based on the extent of cleft. There is no statistical significance in the aesthetic outcome of lips based on the extent of cleft. Major factors influencing the vermilion zone are skin encroachment, counter peak of mucosa to white roll due to misguided lengthening of the lip, incomplete muscle approximation, retained sutures and improper Z-plasties on the vermilion. Inversion of the lateral lip element affecting the vermilion is observed in the posteriorly placed lateral cleft segment.

Conclusions

The aesthetic outcome of the vermilion zone is influenced by the width of the cleft, extent of dissection of mucosa and muscle, proper markings of Cupid's bow, adequate lengthening of the lip, preservation of the vermilion tubercle, meticulous Z-plasties on to the mucosa to avoid peaking of the Cupid's bow, whistling deformities. The outcome is also influenced by the dento-alveolar component and growth of the midface.

S. No. 8

Calvarial Switch Cranioplasty

Dr. Aamir Bidiwala, Dr. Mukherji Srijon, Aamir Bidiwala

Abstract

Background

Brachycephaly occurs due to coronal synostosis resulting in abnormal vertical height of the forehead with supraorbital retrusion (1). Its management requires definitive cranioplasty as early as possible (2).

Objective

Introducing a novel Calvarial Switch Cranioplasty, principally based on Bardach's (1) technique for coronal synostosis correction.

Method

We present a case where this technique was employed successfully to salvage a failed conventional decompression surgery on a 3-year-old.

Conclusion

Calvarial switch technique can be a predictably simple way of correcting major brachycephaly deformity.

References

1. Salyer KE. Slayer & Bardach's Atlas of Craniofacial & Cleft surgery. Lippincott–Raven; 1999. 800 p.
2. Jain S, Wang S, Sandoval-Garcia C, Ibrahim GM, Robinson WL, Ragheb J. Autologous Calvarial Bone Remodeling Technique for Small to Medium-Sized Cranial Defects in Young Children: The Switch-Cranioplasty Technique. *Pediatr Neurosurg.* 2021;56(3):248–253

S. No. 9

Management of Severe Premaxillary Protrusion: K Wire Revisited

Dr. Irfon Syed

SDM College of Dental Sciences and Hospital

Abstract

Introduction

With the advent of nasoalveolar moulding, the incidence of severe premaxillary protrusion has significantly come down. Several techniques have been tried to manage such cases. K Wire fixation has not been in use in recent years for the management of these cases. This technique has been revisited in this particular study.

Aim

To address severely protruded premaxilla in an adolescent with Bilateral Cleft Alveolus with Oronasal fistula.

Patient and Methods

A 13 year old boy was referred to us with severe premaxillary protrusion. Cleft alveolus surgeries were attempted in other centers and

failed. The cleft gap was 13 mm in the left side and 9 mm in the right side. On a vertical plane the difference in the gingival levels was 14 mm. further, oronasal fistulas were present on the labial aspect. Premaxillary Osteotomy and ostectomy was performed. The segment was repositioned and stabilized with K Wire fixation.

Results

The cleft width was reduced to almost zero. The gingival levels are matched. Adequate closure was obtained.

Discussion

Multiple techniques for the management of premaxillary protrusion have been discussed in the literature. The advantages of utilizing K Wire are the simplicity of the technique, ease of removal, and the stability achieved with this procedure. On the other hand, the availability of the armamentarium prevents the technique to be used by the surgeon. Other concerns would be the effect of the fixation on the growth centre, and on the vital structures.

S. No. 10

Incidence and Presentation of Fistula After Primary Cleft Palate Repair: A Study of 2552 Cases in a Tertiary Care Center

Dr. Sarwpriya Sharma

C.H.L Hospital, Indore (M.P.), India

Abstract

Aim

To document the incidence and presentation of residual fistula after primary palatoplasty in our centre.

Material and Method

It was a combination of retrospective and prospective study started in July 2017. From December 2006 to December 2020, a total number of 2552 patients, aged 9 months to 35 years, underwent primary cleft palate repair. Patients were evaluated after 3 months of surgery for the presence of any residual fistulae. The assessment of fistula, if it was evident, done under following parameters; anatomical location, morphological presentation, age of the patient, type of cleft palate and the surgical technique used for palatoplasty.

Results

Out of 2552 patients, only 2169 could be followed up to 3 months postoperatively. Among these, 14.52% showed presence of a residual fistula. The commonest site of its appearance was hard palate (32.4%). Maximum number of patients had 'medium' sized fistula (46.3%) whereas 'oval' shaped fistula was the most prevalent (38.4%). Patients elder than 18 years of age showed highest incidence (30.4%). Among all phenotypes, bilateral complete cleft palate had maximum rate of fistula formation (17.3%) and Bardach two flap palatoplasty showed highest frequency of fistula (16.6%) amongst the 3 techniques practiced by us.

Conclusion

It is essential for every cleft center to document their incidence of fistula formation post palatoplasty, at a regular interval, to assess their quality of surgical care. This could be a useful indicator to help us in improving the results of primary cleft palate repair.

S. No. 11**Simultaneous Maxilla–Mandibular Distraction in Unilateral Hemifacial Microsomia: A Prospective Study***Dr. Kurupati Krishna Lohitha**C.K.S. Theja College of Dental Sciences and Research***Abstract****Introduction**

Hemifacial Microsomia is the second most common congenital anomaly affecting the face. Malformation of first and second brachial arches results in some degree of developmental anomaly of the facial skeleton presenting as mild to gross facial asymmetry, micrognathia, microtia, occlusal canting.

Aims and Objectives

The aim of the present study is to correct the patient's facial asymmetry by lengthening the hypoplastic mandible, correct maxillary occlusal cant and correct obstructive sleep apnea by simultaneous distraction Osteogenesis using an intra oral distraction technique and Le-fort I Osteotomy of maxilla

Materials and Methods

Seven patients (4 females, 3 males) with unilateral HFM who fall under Kaban's Type I and IIA were included in the study and demographic data is obtained. Simultaneous maxillo mandibular distraction is done to correct the facial asymmetry, occlusal canting, vertical ramal, body and maxillary lengthening and midline correction by performing unilateral mandibular distraction and Le-fort I osteotomy and intermaxillary fixation. Derriford appearance scale was used to measure responses to address problems of appearance.

Results and Discussion

In a 1 year follow up, cant correction was evaluated in terms of linear measurement (t value: 32.5; p -value < 0.0001) and angular measurement (t value: 14.3; p -value < 0.0001). Stability of occlusion in terms of Angles molar relation. Correction of asymmetry in terms of midline shift (t value: 14.3; p -value < 0.0001 , highly significant). Correction of OSA with AHI (t value: 13.7; p -value < 0.0001). 2 cases showed moderate relapse in 1 year follow up due to poor patient compliance.

Summary and Conclusion

Simultaneous maxillo mandibular distraction osteogenesis in unilateral HFM patients improves facial asymmetry and correct the occlusal cant. Apart from lengthening maxilla and mandible, this also increases the amount of soft tissue deficiency significantly improving facial esthetics and function.

S. No. 12**Distraction First: A Protocol to Treat T.M.J Ankylosis***Dr. Kannam Harsha Vinay Durga Karthik**Narayana Dental College and Hospital***Abstract****Introduction**

TMJ ankylosis is one of the complex craniofacial condition which not only affects the involved joint but also hinders the whole maxillo-mandibular complex development and makes treatment more challenging. There is always a debate on ankylosis release first or distraction first. In ankylosis release first there is loss of posterior stop and loss vertical height which further worsen the air way.

Aim and Objectives

To evaluate aesthetic as well as functional improvement of TMJ ankylosis patient following distraction first protocol.

Materials and Methods

Twenty patients with unilateral or bilateral T.M.J. ankylosis are selected and demographic data is obtained. Bilateral submandibular incisions made, mandible is exposed and inverted "L" osteotomy given and internal distractors placed and standard distraction protocol is followed. Improvement in mandibular length, airway changes, facial aesthetics of the patients are assessed following distraction.

Results

In a 1 year follow up comparison of length of mandible before and after mandibular distraction (t value – 15.294, p value – < 0.0001). Comparison of ahi index before and after mandibular distraction (t value – 14.449, p value – < 0.0001). Comparison of oropharyngeal airway (OPA) space on lateral cephalogram upper airway space: before versus after (t value – 9.391, p value – 0). Comparison of oropharyngeal airway (OPA) space on lateral cephalogram lower airway space: before versus after (t value – 9.348, p value – 0).

Summary and Conclusion

The study shows that, distraction osteogenesis of the mandible is an effective treatment option for patients with TMJ ankyloses, seemed to have more effective and favourable results due to greater advancement possible with posterior stop, lesser chances of relapse and correction of the deformity at the same time.

S. No. 13**AMD in Growing Patient***Dr. Shah Rasesh Sanjaykumar**Amrita Institute of Medical Science***Abstract****Introduction**

Secondary maxillary hypoplasia is a common dentofacial deformity contributing to the altered facial equilibrium in cleft lip and palate patient. Correction of this deformity is substantially challenging. Lefort I advancement (LF1) and AMD has been the conventional surgical approach for maxillary advancement.

Aims

To correlate AMD in growing age group with (1) need for overcorrection (2) changes in mandible (3) interference with growth.

Materials and Methods

Thirteen patients with cleft related maxillary hypoplasia operated at out center from 2011 to 2020 were included. Parameters were SNA, ANB angle, linear measurement of ANS to PNS, mean mandibular plane (MMP), upper and lower incisor inclination

Results

Among 13 patients, 8 patients had unilateral CLP with cleft alveolus and 5 patients had bilateral CLP with cleft alveolus. The mean increase in SNA was of 5.03°. The ANB angle reduced from – 7.1° to – 1.7°. The linear measurement of ANS to PNS increased from 39.0 to 45.05 mm. The MMP angle was 27°–27.04°. The mean upper incisor inclination increased from 104° to 114.6°. The lower incisor inclination increased from 86.48° to 89.38°.

Conclusion

AMD for cleft individuals at growing age has significant beneficial effects such as reduced deformity for further correction by orthognathic surgery.

S. No. 14**Electromyographic Analysis of Superior Orbicularis Oris Muscle and Its Effect on Maxillary Growth in Patients Operated for Unilateral Cleft Lip: A Prospective Cohort Study***Dr. Alka Ajith**SDM College of Dental Sciences and Hospital***Abstract****Background**

Repair of a cleft lip creates a certain degree of labial tension which is transferred as backward pressure to the underlying maxilla. A considerable inhibition in the sagittal growth of the maxilla along with abnormal muscle function have been theorized by many authors.

Objectives

To compare the electromyographic activity of the superior orbicularis oris muscle and its effect on the maxillary growth between operated cleft lips and unaffected children.

Methods

A single blinded randomized prospective study was conducted on patients operated for unilateral cleft lip and palate within the age range of 7–13 years. The sample was subjected to electromyographic analysis using NEUROPACK S1 (Nihon Kohden). Peak activity was noted on the cleft and non cleft side.

Results/Findings

The study group consisted of 20 patients operated for cleft lip and control group of 20 unaffected age-matched individuals. EMG activity of superior orbicularis oris in operated patients was statistically significant at rest (p value: 0.0170*), lip protrusion (p value: 0.0430*), lip compression (p value: 0.0060) and lip closure (p value: 0.0270), but not during swallowing of water or saliva (p value: 0.1330) and during articulation (p value: 0.8880).

Conclusions

Surgical intervention does interfere with growth in facial region. This could be attributed to the scar tissue in lip and palate which has a restraining effect on growth in facial region. These altered functional matrices play a significant role in determining the growth of facial structures.

Reference

1. Carvajal, R., Miralles, R., Cauvi, D., Berger, B., Carvajal, A. and Bull, R. (1992). Superior Orbicularis Oris Muscle Activity In Children With and Without Cleft Lip and Palate. *The Cleft Palate-Craniofacial Journal*, 29(1):32–3

S. No. 15**Role of Maternal Age, Health During Periconceptional Period and Parental Consanguinity in Occurrence of Orofacial Clefts: A Cross-Sectional Study***Dr. B. Harshini**SDM College of Dental Sciences and Hospital***Abstract****Introduction**

The cleft lip with or without palate is the most common congenital craniofacial anomaly, presenting prevalence that varies between different ethnicities. It presents a complex and multifactorial etiology that involves genetic and environmental factors. Some studies have

observed a significant association among parental consanguinity, exogenous factors, and orofacial clefts.

Aims and Objectives

1. To evaluate the association between maternal health during the periconceptional period and orofacial clefts.
2. To know the association of maternal age and parental consanguinity in conclusion orofacial clefts.

Methodology

A cross-sectional study was carried out on 100 mothers of children with cleft lip and palate using a convenient sampling technique for a 2-year period from November 2019 to September 2021. The mothers were interviewed with a validated questionnaire, and all the interviews were performed by a single calibrated examiner. Collected data were analyzed using SPSS version 20. Descriptive statistics was obtained and the percentage distribution of response to questions was calculated. The Chi-square test was used as a test of significance. Statistical tests were used for analysis and the level of significance was set at $p < 0.05$.

Result

Among 100 children, 48% were females and 54% were males. As far as the type of marriage is concerned, most of them are non-consanguineous marriages (65%). Unilateral cleft lip, alveolus, and palate (54%) are the most common congenital anomalies found followed by bilateral cleft lip, alveolus and palate (20%), incomplete cleft lip (15%), and isolated cleft palate (10%).

Conclusion

The use of vitamin supplements in the first trimester of pregnancy was suggestive of a protective effect against the occurrence of CP and CL (P) in this population. The evidence is consistent in suggesting that consanguinity is a risk factor for non-syndromic orofacial cleft.

S. No. 16**Management of Crouzon Syndrome: The ADC RR Experience***Dr. Adnan Anwer Aziz**Army Dental Center (R&R)***Abstract****Introduction**

Crouzon syndrome is a rare genetic disorder with autosomal dominant inheritance with the prevalence of 1 in 25,000 live births, and it constitutes 4.8% of all craniosynostosis. It is characterized by synostosis of coronal, lambdoid and sagittal sutures. Typical symptoms are proptosis, midface hypoplasia, hypertelorism and class III malocclusion Comprehensive management and early diagnosis of Crouzon syndrome by multidisciplinary approach is preferred for restoration of form, function and aesthetics and it is a challenging aspect for oral and maxillofacial surgeon.

Materials and Method

We report our experience in correction of craniofacial anomaly associated with two patients having Crouzon syndrome. The cases managed in our institute by performing sub cranial Lefort III osteotomy and advancement of midface for correction of the deformity.

Results

The midface region of the patients was advanced after performing the sub cranial osteotomy using different methods with the satisfactory results showing advancement of the midface.

Conclusion

Treatment of Crouzon syndrome is a multidisciplinary approach. Clinicians should recognize the characteristic features of this

syndrome so that early diagnosis and specialized treatment can be instituted early on in the life to avoid development of major craniofacial anomaly which can benefit the patient in psychological development.

References

1. Kaur H, Waraich HS, Sharma CM. Crouzon syndrome: A case report and review of literature. *Indian Journal of Otolaryngology and Head and Neck Surgery*. 2006 Oct;58(4):381–2.
2. Rahimov C, Asadov R, Hajiyeva G, Verdiyev N, Novruzov Z, Farzaliyev I. Crouzon syndrome: Virtual planning of surgical treatment by application of internal distractors. *Annals of maxillofacial surgery*. 2016 Jan;6(1):135.

S. No. 17

Experience of Use of Buccal Fat Pad and Learning Curve in Performing Palatoplasty

Dr. Varun Menon P.

Jubilee Mission Medical College and Research Institute

Abstract

Objectives

The aim of the study was to assess the influence of the experience of the surgeon on the occurrence of fistulas following palatoplasty and also to highlight the principal and evolution of technique of palatoplasty; which when practiced meticulously gives a fistula free palate repair.

Materials and Methods

A retrospective review of cleft palate surgeries performed by a single surgeon on consecutive children from beginning of 2017 till November 2021 palate was done. Cleft palate repair was performed using the Pinto's modification of Wardill–Kilner palatoplasty, Veau–Wardill–Kilner V–Y Push back. Data was collected for cleft palate type, type of repair, cleft width, length of soft palate, quality of muscle, fistula occurrence and location of fistula.

Results

Retrospective analysis of outcomes of Palatoplasty performed by single surgeon at Charles pinto centre for cleft lip palate and craniofacial analysis (from beginning of 2017 to end of 2019) 3 years span on 220 cleft palate children which included all variants and dimensions of cleft palates. Postoperatively results were evaluated for the incidence of fistulas and break down. The surgeon also evolved and modified his technique in the last 2 years (beginning of 2020 till November 2021) and performed 190 cases and didn't had any fistulas or breakdowns.

Conclusion and Clinical Relevance

Different methods of palate repair are like the different religions of the world. They seem so different in their essentials, but they all promise to lead to the same goal.

S. No. 18

Topic: Furlow Palatoplasty for Velopharyngeal Dysfunction Management: Validation of a Predictive Formula

Dr. Bhavya Mishra

Dr. Harvansh Singh Judge Institute of Dental Sciences and Hospital

Abstract

Introduction

Furlow palatoplasty is a popular technique to improve speech outcomes in patients with velopharyngeal dysfunction (VPD). A predictive formula has been developed which measures the post-operative closure ratio (CR) of a patient planned for a Furlow double Z-plasty procedure. However, there is a need to assess and validate the formula. This study aims at testing the predictive formula for calculating CR by comparing the measured post-operative CR with the calculated CR in a large series of VPD cases treated with Furlow Palatoplasty.

Method

A retrospective study on 102 patients with VPD who were treated with Furlow palatoplasty alone at Bhagwan Mahaveer Jain Hospital, Bangalore from March 2016 to March 2021 was conducted. Patients with oronasal/palatal fistula, hearing deficits and below 5 years age were excluded. Data of 92 patients from previous study with additional 10 patients were analyzed for predictive closure ratio and postoperative CR. The values of postoperative CR were compared to the calculated CR and the statistical significance was derived.

Results

The results will be discussed in terms of the statistically significant difference between the predictive and postoperative CR.

Conclusion

The predictive formula once validated can be used globally to improve the assessment for VPD. It will help the surgeon to determine the choice of technique for corrective surgery and measure the outcome of corrective surgery.

Reference

1. Bonanathaya K, Jalil J, Sasikumar AV, Shetty PN. Furlow Palatoplasty for Velopharyngeal Dysfunction Management: Auditing and Predicting Outcomes. *The Cleft Palate-Craniofacial Journal*. 2021 Aug 17: 10556656211035914.

S. No. 19

Trephination Versus Open Surgical Technique of Iliac Crest Bone Graft (ICBG) Harvest in Secondary Alveolar Bone grafting (SABG)

Dr. Apeksha Inamdar

SDM College of Dental Sciences and Hospital

Abstract

The most commonly used autograft for SABG is the ICBG. Techniques namely Trapdoor, Tschopp, Clamp shell and Tessier's are described for open surgical approaches. However, minimally invasive techniques using of curettes, bone biopsy needles and trephine burs are valuable. This study compares the open and the minimally invasive techniques in terms of postoperative complications, ease of surgery and quantity of bone to be harvested from the iliac crest

harvested site. To compare trephination and open surgical technique to access Iliac crest in SABG for anterior ICBG.

Methods

Prospective, experimental, randomized case–control study on 20 patients of unilateral cleft alveolus, between of 8 and 15 years, from June 2018 to January 2020. Study group includes the trephine group; Control group, the open surgical approach. Assessed using objective and subjective signs like:

1. Clinical evaluation by an independent evaluator
2. A questionnaire self-answered by the patient.

Data collected and subjected to appropriate statistical analyses.

Result

The study group had decreased post-operative donor site morbidity and need for post-operative analgesics, with restoration of original gait whereas, control group yielded more amount of cancellous bone graft material compared to the trephine technique.

Conclusion

The trephine technique was easier, less time consuming, with less post-operative complications and providing adequate amount of bone graft material. However, quantity of bone was shown to be more in open technique compared to trephination technique.

Reference

1. Converse JM, Campbell RM. Bone grafts in surgery of the face. *Surg Clin North Am.* 1954 Apr 1;34(2):375–401.

S. No. 20

The Assessment of Quality of Life in Cleft Patients Undergoing Anterior Maxillary Distraction Osteogenesis

Dr. Gowthaman P. R.

A.B. Shetty Memorial Institute of Dental Sciences

Abstract

Introduction

Anterior maxillary distraction osteogenesis is a procedure widely performed in cleft patients for the correction of maxillary hypoplasia. The procedure results in the improvement of mastication, phonetics, aesthetics and subsequently the quality of life of the patient. Quality of life, according to WHO is “an individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad-ranging concept affected in a complex way by the person’s physical health, psychological state, level of independence, social relationships, and their relationships to salient features of their environment.” It reflects the sense of satisfaction or dissatisfaction that the patient has in particular areas of his/her life.

Methods

The goal of this study is to assess the quality of life before and after anterior maxillary distraction in cleft patients. This time bound, prospective study included cleft patients who underwent anterior maxillary Distraction in NITTE Meenakshi Institute of Craniofacial Surgery, Justice K. S. Hegde Charitable Hospital from 01.01.2021 to 30.06.2021. The assessment was done using Orthognathic Quality of Life Questionnaire, preoperatively and 4 months postoperatively.

Results

In this study, there was betterment in the quality of patients’ lives following the correction of maxillary hypoplasia with anterior maxillary distraction osteogenesis.

Discussion

The assessment of quality of life is becoming increasingly important in clinical research as it gives us valuable information regarding the patients’ satisfaction after the intervention. With anterior maxillary distraction osteogenesis, patients had reduced difficulty in biting and chewing. The patients were also less self-conscious and more comfortable socially.

Category: Craniomaxillofacial Trauma

S. No. 21

Neurosensory Evaluation of Inferior Alveolar Nerve Following Mandibular Fracture Fixation Using Modified Zuniga and Essick’s Protocol

Dr. Vishal Kulkarni

Indian Army

Abstract

Introduction

Mandible is most common bone of the craniofacial skeleton to receive impact from various aetiologies, vehicular mishaps being the most common. The injury to the neurovascular bundle damages the inferior alveolar nerve which manifests as neurosensory deficit. The present study evaluates these changes to assess the outcome and recovery time of such nerve injury.

Material and Methods

After taking the inclusion and exclusion criteria, neurosensory evaluation was carried out using 4 parameters corresponding to level A, B, C of neurosensory evaluation. The basis of evaluation was done utilising modified Zuniga and Essicks protocol. The samples were divided in three groups based on location of fracture. The intervals of evaluation were done at pre-operative/post-trauma, 3, 6, 12 months period.

Results

A total of 214 cases were considered for the study. There was a homogenous distribution of samples with regards to age and near homogenous distribution of cases with the three groups. The univariate analysis suggests that there is deterioration of nerve response in post-trauma and immediately following fracture fixation. Multivariate analysis shows that there is significant change of score indicating deterioration of nerve function immediately and 3 months post-op and overall improvement takes place at 12 months post-operative period.

Conclusion

The goal of fracture fixation is to achieve stability in form, function and aesthetics, nerve regeneration after such injuries is seldom being discussed. It is vital that a robust data be available which can throw light on the course of nerve regeneration.

S. No. 22**A Retrospective Study of Panfacial Fracture Management in a Tertiary Care Hospital: A 10-Year Experience***Dr. D. Veerendra Kumar**Vydehi Institute of Dental Sciences***Abstract**

Management of complex craniofacial injuries is difficult, at times challenging to get a desired results and it is multi-disciplinary approach to achieve best possible form, function, and aesthetics for a patient. Seventy-two cases have reported to Vydehi Institute Dental College and Hospital from March 2010 to March 2020 and cases have been reviewed in terms of age, sex, under the influence of alcohol, and management of the same and associated challenges, complications associated.

S. No. 23**An Ergonomic Technique of Managing a Comminuted Anterior Table in Bicortical Frontal Bone Fractures: A 5 Year Experience***Dr. Mamatha Patil**Sparsh Hospital***Abstract**

Bi-cortical fractures of the frontal bone are relatively uncommon. These injuries are often complex and associated with other trauma to the skull base, intracranial contents, ophthalmologic and maxillofacial region. Such patients also require collaboration of several surgical specialists and multiple interventions to treat. The role of the oral and maxillofacial surgeon in such injuries is to ensure that the patient receives an ideal reduction and pre-trauma anatomy of the maxillofacial region-especially the forehead which holds a prominent position on the face. The special challenge in such comminuted fractures is alignment of all the small bone fragments properly in their anatomical position. In this paper, we have described our 5-year experience of such cases. We have also described a simple technique which allows us to put back the small fragments into place and save time.

S. No. 24**Lateral Tarsotomy Incision: An Alternate Approach for Orbital Osteosynthesis in Zygomaticomaxillary Complex Fractures***Dr. Shweta Dharmarajan**Ganga Medical Centre and Hospital, Coimbatore***Abstract****Background**

The lateral canthotomy in conjunction with transconjunctival incision provides unrestricted access to the lateral wall and floor of the orbit facilitating orbital osteosynthesis. Failure to reattach the lateral canthus in its anatomic position leads to blunting of the lateral canthal angle and shortening of the horizontal axis of the eye.

Aim

To evaluate the efficacy of lateral tarsotomy as a substitute to lateral canthotomy with transconjunctival incision for orbital osteosynthesis.

Methodology

20 patients diagnosed with zygomaticomaxillary complex fractures were divided into two groups by simple random sampling. In Group A, lateral canthotomy and in Group B, lateral tarsotomy was used to approach the orbital floor and rim. All the patients were evaluated for surgical exposure and access, score of 1 point was given to each orbital wall for the access obtained. A maximum score of 3 indicates access to all three walls (medial wall, orbital floor and lateral wall) suggesting maximum exposure. A score of 2 or lower indicates the need of additional exposure. Intraoperative events like flap tear, buttonhole, technique sensitivity and postoperative scars, entropion, ectropion and symmetry were evaluated. Patients were followed up at first, fifth and tenth week respectively. All patients were operated by a single surgeon and were evaluated by different consultants to eliminate bias.

Results

Irrespective of the approach, no significant difference was observed in the surgical exposure and access for exploration of the orbital rim and floor and lateral wall of orbit. It was technically demanding for the operator to resuspend the lateral canthal ligament in 5 patients in Group A. One patient in Group A had transient ectropion. At the end of ten weeks, all the patients had a satisfactory aesthetic outcome.

Conclusion

Lateral tarsotomy can be used as a safe alternative for orbital osteosynthesis with almost equal aesthetic outcome.

Reference

1. Emam HA et al. Lateral tarsotomy: a practical alternative to lateral canthotomy to increase orbital access. *Oral surgery, oral medicine, oral pathology and oral radiology*. 2016 Jul 1;122(1): e1–4.

S. No. 25**A Role of IND-VESS in Craniomaxillofacial Fracture Reduction and Internal Fixation: A Randomized Controlled Clinical Trial***Dr. Logitha Sri S., Prof Dr. Venkadasalapathi N.**S.R.M. Dental College, Ramapuram***Abstract****Background**

The anatomical reduction of the Craniomaxillofacial fracture segment is very crucial for the healing, functional and aesthetic outcome. The various modalities for reduction in the literature includes digital, wiring, bone holding forceps, towel clips, etc. with their own drawbacks such as difficulty and wire breakage. However, IND-VESS is an innovative instrument used in reduction and stabilization.

Aim

To evaluate the role of IND-VESS in achieving ideal fracture reduction in craniomaxillofacial fractures by clinical assessment and imaging.

Objectives

1. To evaluate the efficacy of IND-VESS in reduction of the fracture radiologically (Computed Tomography—Cinematic Rendering Technology-CRT).
2. To assess post-operative parameters such as function.
3. To assess intra-operative surgical time.

Methods

40 patients—craniomaxillofacial fractures were recruited and randomly allotted under groups.

Control group (n = 20): Fracture reduction without IND-VESS.

Study Group (n = 20): Fracture reduction with IND-VESS.

DESIGN of IND-VESS: Mono-block solid screw with perpendicular square bone stop to engage and manipulate the fragments as desired in three dimensions. 2-VARIANTS-2 mm × 6 and 10 mm—Frontal, ZMC, Condyle, 2.5 mm × 10 and 12 mm—Mandible (non-condylar), Radiological assessment—CT.

Results

To compare proportions between study and control groups Chi-square test applied, if any expected cell frequency is < 5 then Fisher's exact test used.

Conclusion

The followings were clinically significant.

1. IND-VESS improved fracture reduction 3dimensionally.
2. IND-VESS reduced intra-operative time.

The use of IND-VESS is an effective and easier modality to achieve anatomical reduction.

S. No. 26**Transconjunctival Approach for Orbital and Infra-orbital Rim Fracture**

Dr. Chandni Mathur

Maharishi Markandeshwar College of Dental Sciences and Research

Abstract**Introduction**

The versatility of the transconjunctival approach has strongly led to the increased use in the treatment of orbital trauma. A natural and avascular plane enables a large and safe access to the entire orbital floor. The most commonly used approaches to infraorbital rim and orbital floor are sub ciliary, sub tarsal, infraorbital rim and transconjunctival approach. The infraorbital and sub ciliary incision has significant instances of temporary lower eyelid retraction. The transconjunctival approach decreases the risk of postoperative eyelid retraction, which varies from scleral show to persistent ectropion.

Purpose

The purpose of this paper is to evaluate the clinical efficacy of the transconjunctival approach for treatment of infraorbital rim and orbital floor fracture.

Materials and Methods

Materials for this study involved 4 cases of maxillofacial injuries with orbital floor and infraorbital rim fracture.

Result

Exposure obtained for fracture site was adequate in all cases, for the reduction of orbital floor and internal fixation of infraorbital rim. No cases had intraoperative and postoperative complications. In all cases postoperative aesthetic outcome was satisfactory.

Conclusion

Transconjunctival approach provides the surgeon with excellent exposure to the orbital floor, infraorbital rim, lower two thirds of the medial wall, lateral wall and lateral rim by combining with a lateral canthotomy/cantholysis and with a medial caruncular transconjunctival incision, thus providing extended exposure of the entire orbit.

S. No. 27**Orbital Floor Defect Reconstructed Using Auricular Conchal Graft: A Case Report**

Dr. Nirmala Subramani

A.J. Institute of Dental Sciences

Abstract**Introduction**

Orbital floor fractures have a reported incidence of about 38% of total facial fractures. The goals of orbital floor fracture repair are to free trapped or prolapsed orbital tissue from the fracture defect and to reconstruct the defect with an implant, usually a biomaterial, to restore the anatomy of the orbital floor and the orbital volume.

Case Report

A 28-year-old patient presented with circumorbital oedema and ecchymosis of the right eye due to trauma to the face. Computed tomography showed discontinuity of the infra orbital rim and herniation of the orbital content into the maxillary sinus. Under general anaesthesia, semi-rigid fixation was done at the infraorbital rim and the orbital floor was reinforced with auricular conchal graft harvested from the posterior aspect of the right pinna. On follow up, no post-operative complications found.

Clinical Significance

Reconstruction of orbital defects with cartilage is an excellent option since it has a low anaerobic metabolism and good vascularity, which prolongs the survival of the graft with minimal requirement for oxygen perfusion, thereby improving graft viability and reducing resorption rates compared with bone grafts. Among the spectrum of donor sites available, the conchal cartilage is the most commonly used due to its similarity in shape to orbital floor, malleability, ease of harvest, and limited donor site morbidity.

S. No. 28**Plate Designs in Treating Condylar Fractures: A Comparison**

Dr. Uppuluri Bharath Kumar

Mamata Dental College

Abstract**Introduction**

The literature suggests that condylar fractures account for 17.5–52% of all mandibular fractures. Surgical approach to condyle is always a complicated task. Due to its fragile anatomy there is always a debate to open or not. Malocclusion was present in only 12% of intracapsular fractures, 31% of condylar neck fractures, and 57% of subcondylar fractures. If open reduction is indicated, the biomechanics as per Champy's lines need to satisfy both tension band and compression band to achieve ideal fixation.

Aim and Objective

This paper presentation is to emphasize on evolution of condylar fixation techniques, recent modifications and comparison of various of mini plate designs (delta, rhomboid, trapezoid) their advantages and disadvantages which are suitable for reduction of condylar neck and base fractures.

Materials and Methods

A retrospective study of total number of 30 patients without co morbities were selected for the study. Comparison of stability, ease of plating, operating time, mouth opening and occlusion were compared.

Results

All plates used for surgery achieved adequate results with no greater significant differences. Each plating system has a different advantages and disadvantages

S. No. 29**C-Arm Assisted Open Reduction and Internal Fixation in Management of Mandibular Fractures: A Case Series**

Dr. Somak Saha

VS Dental College and Hospital

Abstract**Introduction**

Mandibular fractures are the commonest, representing about 40%, of all facial injuries. Refinements in surgical methods and improvements in instrumentation has established open reduction and internal fixation (ORIF) as the gold standard of mandibular fracture treatment. However, ORIF has its fair share of drawbacks like less visibility of some parts of mandible (condylar and sub-condylar region), unexpected intra-operative or post-operative hemorrhage, diminished post-operative nerve function, occurring due to tubular shape of mandible, complex anatomy of the region and close proximity to vital structures. Furthermore, while assessing reduction of mandibular fractures, the surgeons use subjective measures like digital exploration and palpation of a bony step deformity and visual confirmation of bony union, none of which can precisely evaluate the accuracy of fracture reduction in perfect anatomical continuity intra-operatively. To overcome these difficulties we have used intra-operative, real time visualized open reduction using C-Arm fluoroscopic imaging technique. Although this technique has been routinely used in orthopedic surgeries and its use has been demonstrated in mid-facial fractures as well, very few people have focused on its application in treatment of mandibular fractures.

Methodology

In this case series we have demonstrated 6 patient with single, unilateral mandibular fracture who were treated by C-Arm assisted open reduction and internal fixation and were evaluated in terms of accuracy of fracture reduction, occlusal discrepancy and incidence of post-operative paresthesia.

Results

In all the cases precise accuracy of fracture reduction could be assessed intraoperatively, eliminating the need for post-operative radiographs, with adequate occlusal rehabilitation and no incidence of post-operative paresthesia.

Conclusion

Intra-operative, real-time C-Arm fluoroscopic imaging technique can be a very useful adjunct to ORIF in the treatment of mandibular fractures.

S. No. 30**To Evaluate the Efficacy of Hybrid Arch Bar**

Dr. Ponnamm C. C.

S Nijalingappa Institute of Dental Sciences and Research

Abstract

Although there are various modes of intermaxillary fixation, which provides effective and versatile means of maxillomandibular fixation, comes with various consequences like mobility, injury to gingiva, prick injuries, glove puncture during application, long procedural time. To overcome these complications, hybrid arch bars have made their way. 30 patients were included, done in Department of Oral and Maxillofacial Surgery, HKE'S Nijalingappa Institute of Dental Sciences, Kalaburgi, between Jan 2020 and September 2021. Ethical clearance obtained. Statistical analysis done using IBM. SPSS 20.0 version software. Clinical evaluation included evaluation of operating time, glove perforation, prick injury, hardware loosening, Plaque Index, gingival overgrowth. Hybrid arch bars showed significant lower operating time, glove perforation, prick injuries, plaque index, good patient compliance. Few patients showed gingival overgrowth and screw loosening. Hybrid arch bars provided good intra-operative maxillomandibular fixation. Placement of arch bars consumes less time and reduces intra-operative period. Hence, hybrid arch bars proved to be an efficient alternative to conventional methods of intermaxillary fixation.

S. No. 31**Use of 3-D Model for Treatment Planning of Maxillofacial Trauma and Pathology**

Dr. Ashwini Baghel

Sri Aurobindo College of Dentistry

Abstract

Technological development strongly drives the evolution of oral and maxillofacial surgery. With the dawn of the twenty-first century, augmenting the scope of oral and maxillofacial surgery has become a reality in the field of patient specific surgery, medicine and healthcare. There is advancing need for means and methods that could grant physicians and surgeons, the ability to improve their pre-operative planning due to which 3-D models have emerged as the key diagnostic and virtual planning tool. This has aided in streamlining the intra-operative proceedings tailored to the needs of each individual patient. The development of 3-D printing technology has helped the surgeons in manipulation of the patient's anatomical structures to get a clearer understanding of the specific condition, pre-operative counselling and to plan the required surgical interventions, thus improving surgical precision and reducing intervention time. It is employed for reconstruction of large bony defects, orthognathic surgeries and aesthetic rehabilitation. These models provide the possibility of a better comprehension along with more predictable results. In this paper, we will discuss about various applications of three-dimensional model in maxillofacial trauma and pathology.

S. No. 32
Biochemical, Morphological and Histopathological Changes in Retrieved Osteosynthesis Plates: A Study

Dr. Deepak Shakya

Sri Aurobindo College of Dentistry

Abstract

Open reduction and internal fixation became a popular method of treatment for maxillofacial fractures from nineteenth century with introduction of osteosynthesis plates. Initially, they were composed of stainless steel but over time titanium plates have gained popularity because of their bio-inert properties. Although, these osteosynthesis plates provide stability to fracture fragments, they come with their own set of long-term complication like metal toxicity and allergy, stress shielding, metallosis, migration, palpability, and thermal sensitivity and infection at the operated site as reported in literature. Owing to these complications, patients often report with signs of infection and/or exposure of the plate leading to pain, swelling, fistula, pus formation or any combination of these. Infected/exposed plates removal is required in such kind of patients. Since the plate surface is in intimate contact with the tissue and body fluids there are chances of metallic surface undergoing changes like cracks and corrosion. Tissues around the plate can also present with inflammation of varying degree. In this paper, the presence of morphological changes in retrieved plates and inflammation in surrounding tissues was studied via SEM (scanning electron microscope) and EDX (energy dispersive x ray evaluation) and histopathologic examination respectively.

S. No. 33
A Bend to a Needle Makes Arch Stable

Dr. Anand S. G.

Azeezia College of Dental Science and Research Institute

Abstract

Most of the reduced zygomatic arch fractures do not require fixation. However unstable arch fractures need external or internal stabilization. External stabilization method commonly used involve use of a zygomatic awl to perform circum-zygomatic wiring followed by tightening over external splint. This paper aims to set forth a less invasive technique for reduction and stabilization of isolated zygomatic arch fractures using a 16 G cannula, which is a simple, aesthetic and cost effective method.

S. No. 34
Facial Fracture Patterns in Moradabad District: A Short Comparative Imaging Study

Pawan Prasad

Teerthanker Mahavir Dental College and Research Centre

Abstract

Introduction

The evaluation of trauma of the facial skeleton is based on clinical examination followed by the appropriate radiographs. Plane radiography has been used successfully for many years but advanced imaging methods such as CT and 3-D CT have been applied more recently. Co-relating the radiographic analysis and surgical treatment option is very important as sometimes the surgical site specifications will differ from their radiographic view.

Aim and Objectives

The aim of this study is to identify and document different patterns of facial fractures along with those not listed in literature and to compare the fracture patterns of conventional radiograph, CT and 3D CT with pattern seen at surgical site.

Materials and Method

Blinded prospective study was conducted on facial trauma patients undergoing treatment at TMDCHRC. Cases once chosen were subjected for clinical, conventional radiograph, CT and 3D-CT observation. The best method for fracture classification and radiographic analysis was implemented and fracture patterns were assessed.

Result

In this study, CT proved to be of more diagnostic value in evaluating fractures over the conventional radiographs. Although axial and coronal sections were found to be significantly more diagnostic in fractures sites such as orbital and antral fractures. Few fractures were found which cannot be classified according to available standard classification.

Conclusion

Different technique are available in evaluating maxillofacial trauma. However, one should be aware about the limitations and advantages of each imaging techniques to provide a comprehensive patient care.

S. No. 35
Functional Evaluation of Condyle Following Open Reduction of Unilateral Subcondylar Fracture: A Non randomised Prospective Case Study

Dr. Arun Kumar C. B.

Govt. Dental College, Kottayam, Kerala

Abstract

Background and Objectives

Open reduction and stabilization of displaced and dislocated mandibular sub condylar fractures offer some distinct advantages over closed reduction. The objectives of the study was to assess mouth opening, movements (lateral excursion and protrusion), vertical height of ramus, nerve involvement (facial nerve) and occlusal disability after open reduction.

Methods

20 patients of trauma related sub condylar fracture which fits in inclusion and exclusion criteria were selected. All patients underwent

open reduction and internal fixation via submandibular or retro mandibular approach. Clinical and radiographic evaluation were carried out preoperatively, post operatively at 1 week, 3 weeks, 6 weeks and 3 months respectively.

Results

The study measured eight variables of which four were quantitative and four qualitative. Barring the methodological errors which are inevitable the results were statistically significant with respect to maximum mouth opening, post-operative ramus height, lateral and protrusive movements and occlusion. Improvement was noted in the surgical complications that occurred, involving facial nerve weakness and parotid gland injury suggesting a temporary nature. All these findings favour ORIF for sub condylar fractures.

Conclusion

Open reduction with internal fixation via a submandibular or retro mandibular approach to obtain anatomical reduction can achieve adequate functional outcomes both clinically and radiographically in treating the displaced and dislocated unilateral mandibular sub condylar fractures. But a more comprehensive randomized control trail is required with more number of cases and longer follow up to make this study more substantiated.

S. No. 36

Comparison of 2 Point Versus 3 Point Fixation for Unstable Zygomaticmaxillary Complex Fracture: A Prospective Study

Dr. Shakelli Dharika

Mamata Dental College and Hospital, Khammam

Abstract

Background

The zmc forms the main buttress for the lateral portion of the middle third of the facial skeleton. Incidence of zmc # is second most common facial fracture after nasal #. Males are more affected than females. Among all the treatment modalities, with the evolution of miniplates there are still controversies in regard to stability aspect of zygoma following 1, 2, and 3 point for fixation.

Aim

The aim of the study is to evaluate the stability of the displaced zmc # with 2 point versus 3 point fixation under general anesthesia.

Methods

This study included 30 patients, divided into 2 groups each group has 15 patients. All were evaluated for the stability, paresthesia, occlusion, mouth opening, malar asymmetry.

Results

All the zmc fractures associated with orbital floor fractures treated with 3 point fixation and non-associated with 2 point fixation, except for malar prominence all other parameters are insignificant.

Conclusion

Our study emphasises for 3 point fixation of zmc fracture for a better clinical outcome in the above mentioned parameters when compared to 2 point fixation.

References

1. Wail Fayeze Nasr, MD et al. Two-versus three-point internal fixation of displaced zygomaticomaxillary complex fractures. *CMTR*. 2017 Mar;14
2. Zaman G. et al. Three point fixation is superior to two point fixation technique for zygomatic complex fracture. *Int j clin trials*. 2019 Nov;6(4):161–166

S. No. 37

Comparative Analysis of Locking Plating System versus Standard Plating System in Mandibular Fractures: A Randomised Prospective Study

Dr. Abhinaba Saha

Institute of Dental Studies and Technology, Modinagar

Abstract

The introduction of miniplates in treatment of mandibular fractures led to a notable decrease in surgical soft tissue trauma, improved ease of handling, with sufficient stability and fixation of mandibular fractures. But the loosening of screws due to transmission of pressure to underlying bone leads to loss of fracture stability and fixation failure. The locking miniplates were introduced in 2003 by Dr. Ralf Gutwald. According to the literature, advantages of the locking system is enhanced stability without transmitting excessive pressure to the underlying bone, leading to less impairment of blood supply. But the drawback of locking plates is that if screws interact with plate at an angle < 90° there is improper fixation between the plate and screw. The purpose of this clinical study was to compare effectiveness of 2.0-mm locking miniplates and screws with 2.0-mm standard miniplates and screws in treating mandible fractures. A randomized prospective study comprising of 40 samples, where 20 patients (group A) were treated with locking plates and 20 patients (group B) were treated with standard miniplates. All cases were evaluated for the type and site of fracture, anatomic reduction, paresthesia, operative time, occlusal discrepancies, need for intermaxillary fixation (IMF) and its duration, infection at the fracture site and any need for the removal of the plates and screws. These factors have prompted us to compare the efficacy of single 2 mm locking miniplates versus two 2 mm standard miniplates in mandibular fractures in patients treated in our department.

S. No. 38

Comparison of Functional Efficacy Between 3 Dimensional Curved Angle Strut Plate versus 2 Miniplates in Mandibular Angle Fractures by Measuring Bite Force

Sevolu Tetteo

Regional Dental College, Guwahati

Abstract

Aim

This study was performed to evaluate the functional efficacy between the curved angle strut plate and two miniplates in a mandibular angle fractures by measuring the bite forces.

Material and Methods

This study consisted of a sample of 16 patients divided randomly into two groups. Each group contains 8 patients where group I (Study Group) was treated with a curved angle strut plate and group II (Control group) was treated using two 2-mm miniplates.

Result

Statistical analysis was done using the independent samples *t* test for comparison of plates and paired samples *t* test for comparison of follow up periods. A significant difference between the two groups was seen with increase of bite forces in the study group in the follow up periods. Substantial improvement in bite force in both right molar and left molar regions was observed between preoperative stage and end of 6th week in both study group and in control group.

Conclusion

Based on the present study, 3D curved angle strut plates provides a more favorable result in regards to functional efficacy when compared to two miniplates in the treatment of mandibular angle fractures.

S. No. 39**Orbital-Zygomatic Fractures Associated with Ophthalmic Injuries**

Dr. Prajwal K. Bharadwaj

Faculty of Dental Sciences, M S Ramaiah University of Applied Sciences

Abstract

Ocular injuries commonly occur in patients with facial fractures. Injuries to the eyes occur in the majority of the patients who sustained midface trauma and approximately 15% amongst them will have decreased visual acuity. Comminuted zygomaticomaxillary complex fractures and supraorbital rim fractures have been reported to be associated with significantly higher incidence of visual sequelae than other forms of mid-facial injury. However, avulsion of the globe is a rare event, and there are only a few reports of true total enucleation of the globes in the literature. Blindness due to optic nerve avulsion is the most serious complication seen with traumatic globe luxation, wherein enucleation or evisceration represents the main form of management. Although ocular trauma may accompany craniofacial fractures, true enucleation is an extremely rare incident which may be isolated luxation or associated with optic nerve or extra ocular muscle avulsion. It is important to know the mechanism of injury in order to plan the management and take preventive measures. Isolated anterior luxation of eye ball without optic nerve avulsion occurs when a blunt wedge insinuates between the supero medial orbit and the eye ball, causing the eyeball to 'pop' out and the eyelids to squeeze shut behind the globe. This paper highlights the incidence of globe injury following facial fractures and experience of management of a case of young male patient reporting with rupture of the right globe following comminuted frontal and zygomaticomaxillary complex fracture.

S. No. 40**A RCT Comparing N-Butyl-2 Cyanoacrylate Tissue Adhesive and Nylon Sutures in Maxillofacial Trauma**

Dr. S. Mohan Krishna Sai

KLE VK Institute of Dental Sciences

Abstract**Introduction**

Wound approximation using needle and suture material has been a long standing practise. The advancement in suture materials from dexterous to conveniently applicable substances led to the development of aesthetically concerned tissue adhesives. The objective of this study is to evaluate and compare the wound healing and infection using N-butyl cyanoacrylate and nylon sutures.

Methodology

34 patients with Facial lacerations within 2–6 cm limit were included in the study. 17 participants were allocated in cyanoacrylate tissue adhesive group and 17 in nylon suture group. The data was subjected to Chi-square test and Mann–Whitney *U* test for statistical analysis.

Results

The wound approximation and infection control were better in the tissue adhesive group than in the nylon suture group.

Conclusion

The study suggests the use of tissue adhesive for closure of traumatic lacerations and incisional surgical wounds leading to cosmetic outcomes comparable to conventional sutures.

S. No. 41**Management of Residual Deformity in Case of Pan facial Trauma: A Case Report**

Dr. Renuka Ajay Avinash

Lady Harding Medical College

Abstract

Pre morbid functional and esthetic reconstruction in disfiguring, post traumatic residual deformity of maxillofacial region is a formidable challenge for the maxillofacial surgeon. Treatment not only involves the esthetic component but also contributes to the psychological and functional harmony of an individual. Objectives of these treatments are to maintain vertical height, facial projection and bilateral balanced occlusion. Hereby, we present a 31 year old male with the history of trauma one year back to the craniofacial region. The patient underwent modified Le Fort I osteotomy to restore pre morbid occlusion along with onlay bone grafting with calvarial bone graft for outer table deformity of the frontal bone.

S. No. 42**Paediatric Orbital Floor Fracture with Oculomotor Nerve Palsy: A Case Report**

Dr. Sivaraghavi B.

Tamilnadu Government Dental College and Hospital, Chennai

Abstract**Introduction**

Pediatric orbital floor fractures exhibit distinctive features from that of adults due to the complex anatomy of the bony and soft tissue structures involved.

Case Report

A 10 year old male child with trapdoor fracture of right orbital floor with muscle entrapment and oculomotor nerve palsy.

Management: Surgical and Medical

Surgical exploration of the orbital floor and entrapment release via transconjunctival approach and post operative medical management.

Discussion

In this case, after successful surgical exploration and entrapment release, intraoperative forced duction test revealed full extraocular movements at all gazes. But postoperatively there was restriction of extraocular movements at all gazes except lateral, superolateral and inferolateral gazes due to IIIrd nerve palsy and evidence of persistent diplopia. Hence, Medical management with Neuroregenerative medications and steroids along with eye exercises was done and there was restoration of full range of ocular movements and improvement in vision.

Conclusion

Surgical exploration and muscle entrapment release may be helpful in relieving just the mechanical restriction, but in cases with nerve palsy, post operative medical management and eye exercises with regular follow up would offer better results such as restoration of the full range of extraocular movements and thus improvement in vision.

References

1. MacIntosh PW, Shah V. Steroids in the Management of Synkinesis after Traumatic Oculomotor Palsy in India. *Neuroophthalmology*. 2017 Sep 14;42(3):13–138. <https://doi.org/10.1080/01658107.2017.1370654>

S. No. 43**Incidence of Plate Removal and Its Correlation to the Site of Injury in Patients with Maxillofacial Trauma: A Retrospective Study**

Dr. V. Gopalakrishnan

16 Corps Dental Unit Indian Army

Abstract**Background**

Maxillofacial injuries can be classified according to its anatomical location of the involved bone and by the degree of involvement like simple, compound or comminuted. Regardless of the site of involvement and nature of trauma the fracture can be addressed by closed and open methods of reduction.

Objective

The aim of this retrospective study was to record the incidence and factors associated with plate removal in patients with maxillofacial trauma.

Materials and Methods

Records of 280 cases managed for maxillofacial trauma in the last (5 years) period from January 2010 to December 2014 by open reduction and internal fixation (ORIF) with osteosynthesis plates were analysed at a tertiary health care facility. Logistic regression analysis was done to find an association between the variables studied and incidence of plate removal.

Results

32 cases (11.42%), 55 number of implants underwent removal of plates due to reasons ranging from infection (50%), plate exposure (9.375%), treatment failure (15.625%), palpability (12.50%), and persistent pain (12.50%), *Zygomatic buttress* and *Para symphysis* sites had highest incidence of plate removal compared to other sites. Being a female [OR 9.87 (4.21–10.72)], age groups of 46–60 [OR 6.39 (4.43–9.62)], 31–45 [OR 11.25 (6.81–13.77)] and 15–30 [OR 10.01 (5.74–12.22)], infra orbital rim among sites [OR 2.03 (1.48–4.67)] significantly increased the odds of incidence of plate removal.

Conclusion

In our retrospective analysis, the overall incidence of plate removal was 11.42%. Maximum plate removals were from zygomatico-maxillary Buttress and Symphysis and parasymphysis regions. Infection was found to be the most common cause of plate removal.

S. No. 44**Endoscopic Assisted Mandibular Condylar Fracture Reduction Versus Conventional Open Reduction and Internal Fixation: A Prospective Study**

Dr. Mamata Singaram

Saveetha Medical College and Hospital

Abstract**Background**

The ideal management of an adult mandibular condyle fracture is a highly debated. However, according to studies Open reduction and internal fixation (ORIF) is proven to bring out favourable outcomes to the patient. The techniques of management in ORIF are next in line for debate. The consensus between conventional ORIF with Endoscopic assisted open reduction and internal fixation (EORIF) are still being worked upon. However, it is prudent to understand the pros and cons between both the techniques.

Aims/Objectives

The aim of this study is to understand and compare the positive and negative outcomes of mandibular condyle fracture management using these two techniques. The parameters put forth to comparison are intra-operative working hours, intraoperative blood loss, post-operative stay period in the hospital, maximum inter-incisal distance (MID) and occlusal harmony on the first post-operative day, transient/permanent trauma to facial nerve and post-operative complications.¹

Results

The study provides an insight to the difference in operatory hours between ORIF and EORIF. The average intra-operative working hours in EORIF is 4.0 h and in ORIF is 3.4 h. The average total blood loss during the surgery in EORIF is 97 ml and in ORIF is 197 ml. The average postoperative stay in hospital for EORIF is 1.8 days and ORIF is 2.6 days.

Conclusion

The study compares the objectives that prove essential to the surgeon and the patient. The limitation to provide further benefits of endoscopic assisted surgery is due to its investment in the armamentarium. A technique sensitive line of management in the reduction and fixation of mandibular condylar fractures needs to be explored with time to achieve its benefits to the fullest.

Reference

1. Michael B, Tobias G, Maximilian W, Claudio R, Martin R, Thomas G, Outcome of surgically treated fractures of the condylar process by an endoscopic assisted transoral approach. *Journal of Oral and Maxillofacial Surgery* (2018). <https://doi.org/10.1016/j.joms.2018.08.013>

S. No. 45**Importance of Multidisciplinary Approach in Craniomaxillofacial Surgery: A Life Saving Boon**

Dr. Prathamesh Vasant Bhujbal

Dr. D.Y. Patil Dental College and Hospital, Pimpri, Pune

Abstract

ORIF of panfacial fractures is the skillful and ideally loved the job for every maxillofacial surgeon. But in major trauma involving inner table fracture of skull with CSF leak, crushed eyeball injury, Difficult

air management (like—Bronchospasm), Covid-19 situation and multiple facial fractures (i.e.—panfacial fracture) is a Challenging job. Patient with panfacial fractures reported to casualty was planned skilfully for surgery under the multidisciplinary approach by maxillofacial surgeon in our institute which includes 9 departments starting from Maxillofacial Surgeon, anaesthetist, Pulmonary medicine, ENT, Neuro Surgeon, Oculoplastic Surgeon, Emergency medicine, Prosthodontist and Intensivist. Each of them had Major role for treating this patient. Therefore, to open our eyes to multidisciplinary approach is most important. Which helps us to grow with all speciality equally.

S. No. 46

Look Into the Eyes: Evaluation of Extraocular Recti Muscle Changes in Patients with Unilateral Orbital Fractures

Dr. S. Jawahar Babu

Sri Ramachandra University

Abstract

Introduction

Orbital fractures have a distinct trauma mechanism and are quite a challenge to manage, due to their complex anatomy. The extent of the injury can be assessed with the help of pre-operative CT scan. Orbital contents and other important structures are likely to be disrupted following trauma and diagnosing the soft tissue injuries is routinely neglected. In an orbital trauma, the injury to extra-ocular muscles and their clinical implications remains a grey area for all maxillofacial surgeons. This study could be a simple start to explore the involvement of extra-ocular muscles following orbital trauma.

Aim

The aim of the study is to radiographically evaluate the changes in extraocular recti muscles following unilateral orbital fractures.

Materials and Methods

This retrospective cohort study was conducted on patients with unilateral orbital fractures. It was recorded at our institution, from 2018 to 2020, using a standard protocol. Radiographically we evaluated the involvement of extraocular recti muscles, following unilateral orbital fracture by identifying the involvement of the extraocular recti muscles with or without bony interferences and we evaluated Hounsfield unit (HU) of the muscle on the affected side with the normal side.

Results

From our study it was inferred that the most predominately involved extraocular rectus muscle was inferior recti with the second most common being lateral recti.

Conclusion

Radiographically we assessed all the 8 extraocular recti muscles. The deviation from the normal values was evaluated and it was finally concluded that the inferior recti muscle is commonly involved in unilateral orbital fractures.

S. No. 47

The Correction of Post traumatic Residual Deformities in Maxillofacial Region

Dr. Ganashree S.

Faculty of Dental Sciences, M.S. Ramaiah University of Applied Sciences

Abstract

Secondary deformities of the face are among the arduous challenges faced by the maxillofacial surgeons at all times. There are various reasons for disfiguring residual deformities post trauma such as extent of injury or defect in which primary surgery impedes to discharge the complete correction, delay in treatment due to existing medical conditions, deficiency in the use of modern diagnostics and treatment facilities, inadequacy in the skills of the operator, malunion or non-union after the primary surgery, secondary infections and healing disorders. Proper correction of such untoward outcome brings about cathartic changes in a patient's life. The appropriate management protocols for the correction of post traumatic deformities such as osteotomies, onlay grafting is necessary for the restoration of facial form, function and aesthetics for both soft and hard tissue structures. The experience and the surgical skills of the treating surgeon is of the paramount importance in handling deformities of such magnitude. In our institute, correction of secondary deformities was performed for various reasons such as when patients had neurosurgical concerns for general anaesthesia, malunion and non-union of the primary surgery performed elsewhere, Sars Covid-19 positive cases at the time of fracture, secondary infection of the implants, patients unwilling to undergo surgical treatment at proper time hence correction of the same at the later time. The few of corrective management protocols has been followed to treat such cases in our institution and has been discussed below with a series of cases.

References

1. Ranganath K, Kumar HH. The correction of post-traumatic pan facial residual deformity. *Journal of maxillofacial and oral surgery*. 2011 Mar 1;10(1):20.
2. Vega LG, Re-operative Mandibular Trauma: Management of Posttraumatic Mandibular Deformities. *Oral Maxillofacial Surg Clin N Am*. 2011; 23: 47–61.

S. No. 48

Evaluation of Mandibular Angle Fracture With 3-Dimensional Curved Strut Plates

Dr. Jeff K. Zacharia

A.J. Institute of Dental Sciences

Abstract

Background

The management of mandibular angle fractures is often challenging and results in the highest complication rate among fractures of the mandible [1]. Despite numerous fixation methods for fixation of mandibular angle fractures, the choice for optimal fixation is contentious. This study aims to evaluate the effectiveness of 3-dimensional strut plates for the treatment of mandibular angle fractures.

Aim of the Study

The study aimed to evaluate the effectiveness of the use of a 2 mm 3-dimensional curved strut plate for the treatment of mandibular angle fractures.

Methodology

Ten patients that met the inclusion criteria for mandibular angle fracture were included in this study. The treatment protocol for mandibular angle fractures included open reduction and internal fixation with the use of a 3D strut plate. The patients were evaluated postoperatively based on occlusion, anatomic reduction by radiographs, stability of fracture fragments, and complications.

Results

All ten patients showed good results and none reported occlusal disturbances. No cases showed segment mobility after fixation. However, one patient had developed infection postoperatively due to which the plate had to be removed, and in one patient paresthesia persisted after 6 months.

Conclusion

Fixation of mandibular angle fracture using the strut plate is comparable in the surgical outcome as the miniplate and is a safe and effective alternative to the single miniplate.

References

- Lee JH. Treatment of Mandibular Angle Fractures. Arch Craniofac Surg. 2017;18(2):73–75. <https://doi.org/10.7181/acfs.2017.18.2.73>

S. No. 49**Comparison of Titanium Plates versus Bioresorbable Plates in Maxillo-Facial Fracture**

Dr. Tapan Kumar Sharma

Divya Jyothi College of Dental Sciences and Research

Abstract

Present paper is aimed to compare the efficacy of bioresorbable plates with titanium miniplates for the treatment of mandibular fractures. For this purpose, 15 cases of fracture were selected, out of which one is treated with bioresorbable plates and others with titanium miniplates. Follow up was done after 2, 4, 8, 12 weeks and then every after 6 months. The patients were checked for pain, oedema, infection, occlusal derangement, suture dehiscence, paraesthesia, malunion, non-union and palpability of plate. Data suggest that the bioresorbable plates are easily adapted and reduction of fracture segments was better than titanium miniplates. But it is weaker than the titanium plates and resulted in cases of screw breakage, loosening of screw and decreased primary stability of the fracture segments, thus requiring longer period of IMF. The bioresorbable plates exhibit negligible complications and good handling properties. However, high cost of the material is the greatest deterrent for its wider use in treatment of mandibular fractures. On the other hand, titanium plates have shown better stability of fractured fragments.

S. No. 50**Clinical and Radiographic Outcomes in Reconstruction of Secondary Deformities of Craniofacial Region: A Retrospective Analysis**

Dr. Rajkumar Krishna Prabhu

Armed Forces

Abstract**Background/Introduction**

The extent and severity of the secondary deformities following trauma determine the osteotomies and reconstruction technique to obtain the best possible esthetic and functional outcomes.

Aim of the Study

To retrospectively analyse the surgical management options used and the clinical and radiographic outcomes obtained in the correction of post trauma residual deformities of the craniofacial region.

Methods

30 cases of residual deformities of the craniofacial region which were addressed by various osteotomies and bone grafting technique, in the past 10 years were included in the analysis from available data. The mode of trauma and presentation, the type of residual deformities, various aesthetic and functional deformities was assessed preoperatively. The various surgical modalities employed, results achieved, complications and pitfalls were recorded.

Results

30 cases of residual deformities underwent osteotomies and reconstruction by grafting to improve the aesthetic and functional outcomes. Lefort I osteotomy and its modifications were undertaken in 08 cases to correct the residual deformities of maxilla and obtain a functional occlusion. Re osteotomy of the entire zygomatic bone to correct the malar projection and orbital dystopia and enophthalmos were undertaken in 13 cases. Concomitant orbital floor reconstruction was undertaken in 07 cases. 08 cases of mandibular deformities and malocclusions were corrected by sagittal split osteotomies and dentate segment osteotomies. Satisfactory functional and aesthetic outcomes were achieved in all the cases.

Conclusion

Residual deformities of the craniofacial region present several reconstructive challenges due to complex anatomy, loss of bony buttresses and pillars, loss of soft tissue with fibrosis, restricted periosteal envelope and bone stock deficiencies and loss of dentition. However satisfactory clinical outcomes can be obtained with conventional osteotomies and grafting.

Keywords Residual deformities, Secondary reconstruction

S. No. 51**Condylar Fractures: Surgical Versus Conservative Management**

Dr. Abhishek Karan

Rama Dental College and Hospital, Kanpur

Abstract**Background**

Condylar fractures can be treated with one of the two methods, including the conservative (closed reduction and immobilization) and/or surgical (open reduction and internal fixation) methods. Both these modalities of treatment have their indications and contraindications and merits and demerits.

Objectives

The present study was designed with the purpose of comparing the outcomes of surgical versus conservative management of moderately displaced sub condylar and condylar neck fractures.

Methods

The present study included a total of 20 patients with moderately displaced condylar fractures in patients > 18 years of age who were randomly divided into nonsurgical and surgical group and were managed accordingly. In the present study, the outcomes of conservative versus surgical management of sub condylar and condylar neck fractures were discussed in terms of seven parameters, including the maximal interincisal mouth opening, protrusive and lateral excursive movements of the mandible, status of occlusion, deviation of mandible during mouth opening, pain (visual analogue scale) and the height of ascending ramus (radiographically) which were measured and evaluated pre and post-operatively at different intervals of time. The follow-up was done for a period of up to 6 weeks postoperatively.

Results

Patients treated surgically showed better improvement in maximal interincisal mouth opening, lateral excursions with minimal deviation, early relief from pain, and restoration of height of the ramus with symmetry in comparison with the patients managed conservatively where prolonged periods of pain apart from obvious deviation and minimal restoration of height of the ramus was observed over a follow-up period of 6 weeks postoperatively.

Conclusion

Surgery is inarguably preferred over conservative management of moderately displaced condylar fractures as per the results of the present study. This study provided valuable information and mandated further studies with larger sample sizes to come to definitive conclusions.

S. No. 52**Maxillofacial Trauma Care: A Potential Screen of Clinical Examination**

Dr. Arunesh Kumar Tiwari

King George's Medical University, Lucknow

Abstract**Introduction**

The injuries of maxillofacial region are not usually life threatening and its management comes under secondary survey. During examination in maxillofacial injuries, we can screen the other associated injuries related to maxillofacial injuries that was still unaddressed and can be lethal or create some post trauma morbidity. With this intention we planned to observe and generate data about frequent unnoticed injuries.

Material and Methods

All the trauma patients were included in this study who were admitted in trauma center maxillofacial unit from Oct 2017 to March 2019. Data were collected during clinical examination by attending surgeon and patient's record.

Results

We observe total 270 patients having serious maxillofacial injury and admitted under maxillofacial trauma unit and found some unnoticed injuries of maxillofacial areas such as cervical spine injury, Styloid process fracture, Head injury, brachial injury, clavicle fracture etc.

Conclusion

We should observe the complete patient and by our observation we can notify some unnoticed injuries and advise for the management within time to reduce post trauma morbidity.

S. No. 53**Solitary IMF Dental Cleats: A Novel Device for Achieving Maxillo-Mandibular Fixation**

Dr. Amiya Agarwal

King George's Medical University

Abstract**Introduction**

Management of maxillofacial trauma invariably involves maxillo-mandibular fixation owing to the functional aspect of rehabilitation. In fact, fixation for stabilisation is one of basic tenets of bone injury management. Problem: For maxillomandibular fixation various methods of fixation have been adopted time to time. All these wirings, bars (Erich's, Jelenko etc.) involve dentition to take support from but in certain instances when the dentition is partial and such that the key dentition involved in establishing occlusal relationship is a lone tooth standing with no mesial or distal member. In such cases putting arch bar or a segment of it is difficult.

Material and Method

To overcome this problem we conceptualized a fixation device having inbuilt free tie-able wires at its ends, a buccal support plate containing one or two cleats (hooks) to engage elastics or wires for maxilla-mandibular fixation. The two ends taper mesially and distally to culminate into wires that can be embraced around the tooth to be tightened by inter-twinning at the gingivo-mesio-buccal point angle. However, we constructed these cleats utilizing the segments contains two cleats of Erich's arch bar, the ends of these segments were curved utilizing the orthodontic plier and converted into the mesial and distal buccal tubes to contain the wire used for engaging this on the buccal aspect of lone tooth.

Results

20 cases were done to check the feasibility and applicability of the conceptualized device.

S. No. 54**Comparative Evaluation Between 2 mm Locking and 2 mm Non-locking Miniplate System for Open Reduction and Internal Fixation of Mandibular Para symphysis Fracture**

Dr. Rajarshi Bandyopadhyay

Guru Nanak Institute of Dental Sciences and Research

Abstract**Aims**

To compare the stability, rigidity, bone healing and functional outcome of 2 mm locking and 2 mm non-locking miniplate system in mandibular parasymphysis fracture.

Material and Method

The study was conducted in the Department of Oral and Maxillofacial Surgery, GNIDSR, Kolkata, India, from May 2016, to December 2019, 34 patients (male 30 and female 4) were randomly divided into

2 groups. The patients underwent osteosynthesis—Group A (n = 17, 15 males and 2 females) with orthomax 2-mm locking titanium miniplates (LMP) and Group B (n = 17, 15 males and 2 females) with orthomax 2-mm nonlocking titanium miniplates (NLMP). The age, gender, operating time, pain and swelling, mobility, occlusion, chewing efficacy, bony healing with radiological evaluation were all reviewed. The assessment of the patients was done preoperatively and postoperative days at 1st day, 3rd day, 7th day, 14th day, 1st month, 2nd month, and 3rd month using the clinical parameters, observation and radiology.

Results

A total of 34 Para symphysis fractures met the inclusion criteria. In our study, a statistically significant difference was not found in the clinical parameters such as operating time, pain, swelling, occlusion, chewing efficacy, mobility between the fracture segments and infection, hardware failure in the postoperative period. A statistically significant difference was found in the CT scan evaluation with preop and post op fracture width and Hounsfield unit in between two groups at preop and 3rd month postop days and it was also supported by OPG findings.

Conclusion

We concluded that locking miniplates are technically not cumbersome than non-locking one. No significant increase in operating time. Use of two locking miniplates in the parasymphysis region placed on the Champy's line of osteosynthesis provides a better stability and osteosynthesis at the 3rd month postoperative period than non-locking.

S. No. 55

Comparison of Single versus Two Non-compression Miniplates in the Management of Unfavourable Angle Fracture of the Mandible

Dr. Anuj Jain

Department of Trauma and Emergency Medicine, All India Institute of Medical Sciences, Bhopal, Madhya Pradesh, India

Abstract

Purpose

The purpose of this study was to compare the efficacy of single versus two non-compression miniplates in management of unfavourable angle fracture of mandible.

Materials and Methods

A total of 28 patients who required open reduction of mandibular angle fracture were included in the study. The patients were randomly divided into two groups. Group I comprised of patients treated with two miniplates and that in Group II were treated with single non compression miniplate. The parameters of assessment were malocclusion, surgical site infection, need for implant removal, duration of surgery, inter-incisal mouth opening, and cost of implants used, in both the groups. Statistical analysis was carried out to compare all the parameters.

Results

Out of 14 patients in group II, inadequate reduction was noticed in three patients, screw loosening occurred in two cases. Screw loosening was always associated with chronic infection. In these cases, hardware removal was deemed necessary. Plate bending was observed in two cases resulting in malocclusion and difficulty in eating. Non-union of fracture occurred in one patient treated in group II. In group I, no plate bending, screw loosening, surgical site

infection, non-union or malocclusion was observed. No patient had to undergo implant removal in group I.

Conclusion

In the management of unfavourable mandibular angle fracture, two plates must be preferred over the use of single miniplate as using two miniplates results in better results with minimal complications.

S. No. 56

Revisiting Coronal Incision Approach for Management of Zygomatic Complex Fractures

Dr. SQN L. Desai Jimish Bhvikkumar

NA

Abstract

Aim and Objectives

The coronal incision with its various modifications provides the most versatile approach to the craniomaxillofacial region coupled with excellent exposure. The aesthetic advantage of a hidden scar in the hairline, accounts for its continued popularity. The aim of the present study was to study the effectiveness of coronal incisions for treating zygomatic complex fractures. The objectives of the study were to evaluate the advantages and disadvantages of the coronal incision with a special emphasis on post operative morbidity.

Patients and Methods

In this prospective study, 45 patients were randomly selected regardless of age, sex requiring open reduction and internal fixation of comminuted zygomatic complex fractures with or without other associated fractures of the midface. Patients were all treated by coronal approach for open reduction and internal fixation of fracture of the zygomatic complex.

Results

In the early postoperative period, 5 patients suffered from haemorrhage, 3 had infections, 9 patients reported immediate postoperative anaesthesia and paraesthesia affecting the supraorbital region. Four had symptoms and signs of facial nerve injury: difficulty with wrinkling the forehead or to closing the eyes. After a follow-up of 1–3 years, 1 case suffered from a scar wider than 5 mm, paraesthesia in 2 cases. None of the 45 patients had (persistent) palsy of the facial nerve or depression of the temporal fossa region.

Conclusion

Coronal incisions and its modifications offer a versatile approach to the craniofacial region. The incision is associated with its own share of complications but none of them being of permanent nature and of less concern over a long term follow up time. Coronal approach combined with other approaches offers superior exposure to the anatomical site as compared to traditional approaches in the treatment various pathologies and conditions of the craniofacial region.

Keywords Coronal incision, Zygomatic complex fractures, Indications, Complications, Indispensable, Versatile

S. No. 57
Weight Changes (in kg) in Mandible Fracture Patients After Inter Maxillary Fixation: A Prospective Study

Dr. Lone Parveen Akhtar

NA

Abstract

Background

This prospective study is done to assess weight loss due to maxillo-mandibular fixation (MMF) in patients who have undergone treatment for maxillofacial fractures. This fixation method is a closed reduction technique that can interfere with normal nutrition intake of solid and semisolid foods and thus can result in weight loss and malnutrition. Therefore, in this study we explain the degree and pattern of weight loss in patients treated with MMF.

Materials and Methods

This prospective study was performed in oral and maxillofacial surgery (OMFS) Department, Indira Gandhi Government Dental College (IGGDC), Jammu. We treated 300 patients for 4–6 weeks of MMF. Among these patients, 270 patients were males and 30 females, age ranging from 15 to 50 years. The pre-operative weight ranged from 45 to 89 kg (kg). All patients were treated with MMF for 5–6 weeks. Weight of the patients was noted pre-operatively, first week post-operatively, and fifth week post-operatively. Within the limitations of this study, significant weight loss was observed at the first week post-operatively among all patients. At the release of MMF, the weight measurements were done again.

Results

The loss of weight was statistically significant ($P < 0.001$) with MMF treatment.

Conclusion

MMF caused mild to moderate malnutrition in some cases, so protein diet was recommended to such patients post treatment.

S. No. 58
Comparative Evaluation of Transconjunctival and Subtarsal Incision for Exposure of Infraorbital RIM in Midface Fractures: An RCT of 30 Cases

Dr. Sruthi Rao

NA

Abstract

Introduction

Conventional approaches for the treatment of fracture involving infra-orbital rim has been by cutaneous infra-ciliary incisions namely the sub ciliary, mid lower eyelid or sub tarsal and infra-orbital incision. These approaches leave behind a scar which may be cosmetically disfiguring. An alternative method that avoids the cutaneous scar with adequate exposure is the use of the concealed transconjunctival incision placed through conjunctiva. The transconjunctival incision is one of the recognised and acceptable approaches for the access of infra-orbital rim and orbital floor.

Aim

Evaluation of trans-conjunctival and sub tarsal approach for exposure of infraorbital rim in midface fractures.

Objective

To compare two different surgical approaches, average time from incision to fracture exposure, the exposure of fracture site achieved, aesthetic appearance of scar, Complications-Intraoperative and post-operative and factor of time on scar.

Materials and Methods

A total of 30 patients reporting to our tertiary care hospital with midface fractures involving the orbital rim/floor with or without fractures of the facial skeleton or requiring exposure of orbital rim were taken for the study. Preoperative assessment including detailed history, thorough clinical examination, and extra oral photographs for scar assessment were taken pre and post operatively. My paper will take you through the outcomes of this study.

S. No. 59
Reconstruction of Orbital Floor Fractures with Titanium Micromesh: Our Experience

Dr. Chandrashekhar Chattopadhyay

Dr. S.N. Medical College, Jodhpur, Rajasthan

Abstract

Aims and Objective

The purpose of this study was to assess the use and accuracy of the titanium micromesh for primary internal orbital reconstruction in cases of either pure or impure orbital blowout fractures.

Design

Retrospective case series of 21 patients with a mean follow-up of 12 months.

Place

Department of Dental Surgery of a teaching tertiary medical college Hospital.

Material and Methods

Twenty-one consecutive patients underwent surgical reconstruction of orbital floor/or combination of floor and rim fractures using titanium micromesh. Outcome and evaluation persistence of diplopia, orbital dystopia, implant extrusion, enophthalmos, infection and complications. The recorded data included age, gender, cause of trauma, diplopia, enophthalmos, ocular motility. Preoperative orbital PNS/CT and postoperative paranasal sinus view skull preoperative and post-operative ophthalmological examination.

Results

Most of the patients were males and resulted from the trauma inflicted during RTA, sport injuries or assault. The most common fracture pattern was impure Blow out fractures, and commonly associated with other facial fractures were midfacial fractures. Clinical examination along with diagnostic aids such as computed tomography of orbital fractures was used. Orbital floor exploration was performed in 21 cases due to functional or aesthetic deficits. All orbital floor bone defects required reconstruction. In these cases, orbital floor was reconstructed with 3 mm titanium micromesh implant. We did not encounter any major complications related to the incisions or implant material though sample size was small. The rate of complication in which correction was difficult (diplopia) was lower [4%, 1 case].

Conclusion

Titanium mesh gives excellent result in orbital floor fractures. Surgical anatomical landmarks knowledge is very important to prevent any intra- or postoperative complications.

Keywords Orbital floor fractures, Titanium mesh, Complications, Anatomical landmarks

S. No. 60
Intraoperative Assessment of Reduction of Zygomatic Arch
by USG

Dr. Bharat Shukla, Dr. Gourab Das

Abstract

Three-dimensional imaging using computed tomography is established in preoperative diagnostics and surgical planning of facial fractures and has almost substituted conventional tomography in fracture diagnostics. In view of the radiation exposure, low dose CT scanning has been described as a possible modification, and systems based on cone-beam CT seems promising. Ultrasound imaging in the head and neck region, however, is mainly recommended for identification of pathological alterations related to soft tissues. Sonographic fracture diagnosis of the midface was reported to be successful in several midfacial regions including orbit, zygomatic arch, and nasal bone. The aim of this study was to demonstrate the visualization of zygomatic arch fractures and their reduction intraoperatively using ultrasound.

S. No. 61
Paediatric Orbital Fractures: Our Experience

Dr. V. Harshitha, Dr. Prof. Venkadasalpathi N.

M.R. Ambedkar Dental College and Hospital

Abstract

“Children are not small adults” when managing paediatric orbital fractures. In a child, the craniofacial skeleton undergoes significant change in size, shape, and proportion as it grows into maturity. Since autogenous bone graft reduces the risk of infection and calvarial bone graft is now often considered the material of choice in many aspects of craniomaxillofacial skeleton reconstruction when non-vascularized bone is acceptable. In this study, we aimed to discuss the efficacy of our management method that is the use of autogenous calvarial bone grafts on treatment of the pediatric patients with orbital floor fractures.

S. No. 62
Management of Extensively Communitated Fracture
of Zygomatico-Orbito-Maxillary Complex: A Case Presentation

Dr. Arindam Mandal

NA

Abstract

Zygomatico-orbito-maxillary complex (ZMC) is one of the most encountered fractures in India. Due to rapid increase in motor vehicle accidents on road and also in the change in living styles of life, the rate of accident has been increased. I will be presenting a case of severely comminuted fracture of ZMC where the following situations I had to encounter during surgery. A degloving type of injury creating a hemiconical cum hemifacial type of laceration with complete tear of upper and lower palpebral fissure causing right eye globe fully naked with detachment of extra ocular muscles, complete loss of

lateral and inferior orbital walls, zygomatic bones were too broken to get an anatomical orientation. The main challenge in these injuries are right evaluation of eye injuries and right decision to preserve or not preserve the eye and also maintaining the aesthetic facial form, function and symmetry. In the particular surgery a teamwork with ophthalmic surgeon was performed, the injured eye was preserved, all broken bony framework was rebuilt and good aesthetically acceptable facial form was achieved. A 1 year follow up was done and the final result was satisfactory. Patient could see from both eyes, mouth opening was three finger and was leading a normal daily life. Craniomaxillary fractures are always a major task for maxillofacial surgeon because same priority should be given to restore both function and esthetic of orofacial region.

S. No. 63
Complex Facial Fractures

Dr. Vijaylaxmi Shettar

K.L.E. Vishwanath Katti Institute of Dental Sciences, Belgaum

Abstract

Complex facial fractures involve fractures of multiple facial bones. These most commonly occur secondary to high impact motor vehicle accidents. They involve multiple systemic injuries requiring multidisciplinary approach. Treatment involves restoration of facial buttresses to reinstate function and cosmetic improvement. Since treatment of these fractures is technically challenging, the fractures need to be approached in a systematic manner. Here we are presenting cases of complex facial fractures.

S. No. 64
‘Sutureless’ Transconjunctival Approach for Infra-orbital
Fractures

Dr. N. Vaibhav

M.R. Ambedkar Dental College

Abstract

Introduction

To analyse the technique and surgical outcomes of infra-orbital fractures treatment using ‘suture less’ transconjunctival approach.

Materials and Methods

In this prospective clinical study 15 patients with infra-orbital rim or orbital floor fractures were selected and treated using pre-septal transconjunctival approach. After reduction and fixation, the conjunctiva was reapproximated and re-draped into the fornix without any closure. Study parameters included assessment of post-operative complications at intervals of 1 week, 15 days and a month post-operatively.

Results

All patients showed good ocular motility. None of them showed any postoperative eyelid dystopia No ectropion, entropion, lagophthalmos was observed. None of the patients showed cicatricial scarring of the conjunctiva or shortening of the conjunctival fornix, any implant infection or foreign body granulomas.

Conclusion

Foregoing closure of the conjunctiva and the periorbita after transconjunctival approach is associated with minimal complications and is a technically simpler viable alternative to traditional multi-layered closure post orbital repair.

S. No. 65

Assessment of Prevalence, Fracture Pattern, Need of Treatment and Proposal of a New Classification System for Mandibular Ramus Fracture

Dr. Shikha Tayal

GDCH Nagpur

Abstract**Background**

The fractures of mandible constitute the bulk of trauma treated by the Oral and Maxillofacial surgeons. Even with advancement in trauma management systems, mandibular ramus fractures per se are still overlooked and managed conservatively in almost all parts of the world.

Research Aim

To propose an evidence based clinical classification for mandibular ramus fractures that gives a better outlook and helps in better treatment planning as well as execution.

Methods

The investigators implemented a prospective study conducted at a tertiary trauma care center where 5 years data was extensively evaluated. The sample composed of all the patients having ramus of mandible fracture. The patients' age, gender, aetiology of mandibular fractures, associated fractures along with the ramus fractures and method of treatment was evaluated and analysed. Post-operative orthopantomogram and occlusion was the outcome variable. Descriptive and bivariate statistics were computed and the *P* value was set at .05. The patterns of various ramus fractures studied extensively and a classification of different types of fracture pattern proposed.

Results

The sample composed of total 1700 patients of maxillofacial trauma, the mandibular fractures accounted for about 63.35% ($n = 1077$) of all the facial fractures. 36 out of 1077 patients reported with Ramus fractures (3.36%). The age of the victims of ramus fractures ranged between 18 and 70 years with an average age of 37.16 years and male: female ration 8:1. There was a statistically significant association between pre-op and post-op occlusion ($p < 0.001$) and post-op reduction of fracture ($p = 0.04$) following management of ramus fracture.

Conclusion

The results of this study suggest that closed reduction is obsolete and Ramus fractures should be surgically reduced and internal fixation done to achieve the optimal results like any other mandibular or facial fractures.

S. No. 66

Real Time Ultrasonography as an Therapeutic Tool for Management of Zygomatic Maxillary Fractures

Dr. C. Deepak

Sri Ramachandra Dental College and Hospital

Abstract**Aim and Objectives**

The aim of this study is to evaluate the use of ultrasonography intra-operatively to assess the reduction of unilateral zygomatic complex fractures with a control group using the conventional blind digit palpation.

Methods

The study comprised a sample size of 24 patients with 21 male and 3 female patients. Patients of all age groups diagnosed with a unilateral displaced zygomatic complex fracture with or without mandible fracture were included in the study. The subjects were randomized into study and control groups based on a standard protocol with a total of 24 patients. Imaging was in the form of a preoperative and post operative three-dimensional computed tomography scan with reconstruction of the maxilla and mandible to interpret the diagnosis for all subjects. The inter-fracture distance of the fractured infraorbital rim was measured in three dimensions (antero-posterior, medio-lateral and supero-inferior) and compared pre and post operatively. Preoperative, intra-operative and post operative ultrasonographic examination was performed and recorded on all patients at the frontozygomatic region, infraorbital rim and zygomatic buttress to assess the proximity of the fractured margins pre reduction, post reduction and post fixation of the fracture segments.

Result

Statistical analytic results were significant in all three dimensions when measured post operatively using computed tomography.

Conclusion

Ultrasonography is an effective screening and intraoperative therapeutic tool in the armamentarium of oral and maxillofacial surgery for management of zygomatic maxillary fractures.

S. No. 67

Exposure of Condyle Through Endaural Approach: Our Experience

Dr. Georgeno G. L.

M.R. Ambedkar Dental College, Bangalore

Abstract

The goal in the treatment of all fractures is the readjustment of the fractured parts to their normal alignment, and maintenance of the parts for a sufficient length of time so that healing may occur. This is not always possible due to the inaccessibility of certain osseous structures. Treatment of sub condylar fractures has been relegated to a limbo of negativistic therapy due, in part, to a feeling that the area is inaccessible without great danger to important structures. Consequently, external splinting is used with no attempt at definitive fixation for anatomical healing. This, we feel, is completely non-surgical and leaves much to be desired. The condylar neck is the narrowest part of the mandible and consequently particularly subject to trauma. The attachment of the external pterygoid muscle to the anterior meniscus and condyle invariably causes this fragment to be

rotated anteriorly and medially. There may be a fracture-dislocation of the upper fragment with displacement to a very deep anterior position. Together with this, the lower portion is pulled superiorly due to the action of the internal pterygoid, masseter, and temporalis muscles. This results in a loss of vertical dimension. Reduction of segments in this area endangers due to the presence of facial nerves. The incision for the endaural approach follows the cartilage part of the external auditory meatus which gives a safer space for the dissection. Postoperatively all the patients exhibit intact facial nerve function.

S. No. 68
Orbital Floor Reconstruction using Maxillary Anterior Wall Graft: A Longitudinal Study

Dr. Vidya K. C.

Kalinga Institute of Dental Sciences, K.I.I.T University

Abstract
Purpose

The present study was conducted to assess outcomes following the reconstruction of orbital floor fractures defect using graft from anterior maxillary wall.

Materials and Methods

14 patients underwent repair of unilateral orbital floor blowout fractures using graft from anterior wall of maxilla under general anaesthesia. The opposite side of anterior maxillary wall was opted as a donor graft site. The defect ranged from 0.4 to 1.5 cm. Sub-ciliary approach was taken for all 14 patients. Primary outcomes were measured in terms of diplopia, infra-orbital nerve paraesthesia, changes in ocular level and vision. Post-operative complications (oedema, graft rejection, graft exposure, epiphora, ectropion, entropion, chronic sinusitis, and inflammatory changes in the wound) were also assessed. The postoperative follow up was done for a period of 6 months.

Results

Out of 14 patients, 12 had diplopia on the affected side pre-operatively and 2 post-operatively. 10 patients exhibited change in the ocular level before surgery. Post-surgery, all 14 patients had pre-morbid ocular levels. of the 8 patients who had infraorbital nerve paraesthesia pre-operatively, only 2 reported paraesthesia following surgery. Vision was unaffected in all 14 patients. 4 patients had graft rejection, 2 had epiphora and 1 patient developed sinusitis post-operatively.

Conclusion

The use of anterior maxillary wall as a graft site for reconstruction of medium to small sized orbital floor defect yields good, predictable results with minimum complications and excellent functional an aesthetic results.

S. No. 69
C-Reactive Protein as a Prognostic Tool to Determine the Treatment Outcome in Maxillofacial Fractures

Dr. Akshatha K., Dr. Soumi Samuel

Yenopoya Dental College and Hospital, Mangalore

Abstract

Introduction

The sequel of maxillofacial fracture will invariably lead to swelling which may be an inflammatory response or as a result of infection.

Aim

To evaluate levels of CRP with severity of maxillofacial trauma and to correlate it with the overall prognosis of maxillofacial fractures after standardized surgical treatment.

Material and Methods

This prospective study on CRP was conducted on consenting subjects of all age groups presenting with maxillofacial trauma for a period of 22 months. Subjects with head injury, poly trauma, hepatocellular disease, cardiovascular disease, pneumonia or if the patient had a recent history of surgery in the past 1 month were excluded from the study. The CRP levels were assessed preoperatively at the time of admission, post operatively after 24 h and on postoperative day four. Statistics was done using the SPSS software.

Results

The fractures involving mandible have higher CRP values than ZMC fractures which was statistically significant. Comparing the closed and open fractures, statistically significant CRP values were seen in open fractures.

Discussion

The kinetics of CRP in subjects who had surgical treatment for facial fractures varies with the region of trauma and bone involved. CRP levels reach its peak levels within 48–72 h after tissue injury, after which the levels of CRP decreases. A second rise in CRP values after a short period of decline is a sign of infection, thus helping in the judicious use antibiotics.

S. No. 70
Peri-angular Incision for Management of Mandibular Condyle Fracture

Dr. Nilesh Pagaria

Shri Krishna Hospital, Raipur

Abstract

Approaches for fixation of mandible condyle fracture has been a matter of discussion. An approach should enable direct access to the fracture of all types, minimal scarring and least chances of nerve injury. Peri-angular approach is one such method which meets most of the objectives. in this presentation I sure my experience with 30 cases of condyle fracture fixated via this approach.

S. No. 71
Gunshot Wound of Cranium and Face: 3 Years Retrospective Evaluation on Patterns and Management

Dr. N. Mohan Rangan

Armed Forces Medical College

Abstract

Purpose

Facial gunshot wounds can result in devastating functional and aesthetic consequences for patients. To evaluate the management and outcome in these patients, a 3-year retrospective review was undertaken of all patients presenting with facial gunshot wounds (GSW) of cranium and face at a secondary level trauma centre.

Patients and Methods

The data bank of all trauma cases was scrutinized and 384 cases with Cranio-maxillofacial (CMF) injuries that reported between March 2018 and April 2021 were evaluated. Ninety-one cases were of GWS of cranium and face and were included in the study. Cases were evaluated for age, gender, aetiology, facial region and pattern of injury, management, and outcome. The output factors like restoration of form and function, duration of hospital stay, neurological deficit, post trauma stress disorder (PTSD) was studied.

Results

Age ranged from 25 to 55 years with mean of 28 + or – 4.98 years. There were 89 (97.8%) males and 02 (2.2) females. Sixty eighty (75%) patients required airway management. The most frequent site involved was mandible in 48 (52.7%) followed by midface in 32 (35%) patients. The cranium was involved in 11 (12%). Open reduction and internal fixation were performed in 77 (84.6%) patients. Fourteen percent ($n = 12$) had vascular injuries and deemed surgical intervention. Fifteen (16.4%) patients had some complications; trismus, sinusitis and post-operative neuromotor deficit. Overall mortality in the series was 2.1%.

Conclusion

Most patients required surgical intervention. Reconstructive procedures were performed early, when possible, addressing both the soft tissue and bone. The primary objective is to study the frequency, severity, pattern, and management of CMF injuries with a further insight to sensitize the primary care centres regarding handling of CMF injuries reporting to them, thus honouring the golden hour principle.

S. No. 72
Evaluation of Post-operative Outcomes of Fronto-Naso-Orbito-Ethmoidal Fractures

Dr. Sai Santosh Patnaik J., Dr. Ravi Shankar Mikkilineni

Anil Neerukonda Institute of Dental sciences

Abstract

Background

Fronto-naso-orbito-ethmoidal (FNOE) complex is a group of intricately arranged bones forming the medial vertical buttress of face. Trauma to this complex region is often challenging to repair as it involves both hard and soft tissue components.

Aim

The aim of this article is to evaluate the post-operative anatomical and functional outcomes of FNOE fractures.

Methods

There were 8 cases of FNOE injury reported, out of which 2 cases were treated conservatively due to their neurological status. 6 cases operated during the year 2020–2021 were included in the study. Follow up period was 6 months. Anatomical outcomes were measured by (i) pre-operative (pre-op) and post-operative (post-op) eye ratio (ii) Evaluation of Naso-frontal angle (NF) and (iii) Intercanthal width. Functional outcomes were measured by (i) Gaze test (ii) Hess chart and (iii) assessment of epiphora.

Results

Out of 6 operated cases, cranialization and reconstruction of frontal bone with titanium mesh was done in 2 cases. Trans-nasal reduction with plate and screw fixation for NOE region was done in all cases. The average post-op eye ratio was 98.1%. The NF angle was between 115° and 130°. There was mild discrepancy in distance between medial canthi in 3 cases. Single patient had persistent diplopia which was resolved eventually.

Conclusion

Realignment of FNOE complex along with restoration of soft tissue contour in naso-orbital valley plays a key role in improving post-operative outcomes of FNOE complex fractures.

Reference

1. Herford AS, Ying T, Brown B. Outcomes of severely comminuted (type III) naso-orbitoethmoid fractures. *Journal of oral and maxillofacial surgery*. 2005 Sep 1;63(9):1266–77

S. No. 73
Effectiveness of Delta, Lambda and Strut Plates in the Management of Sub-condylar Fractures: An Interventional study

Dr. Karthik Kumar

A.J. Institute of Dental Sciences

Abstract

Introduction

Mandibular fractures are frequent in facial trauma, out of which condylar fractures account for more than a third of all mandibular fractures. Surgically treated condylar fractures have better results in comparison to non-surgical methods. The newer 3D plates owing to their design, withstand lateral and anteroposterior directed forces better and provide stability in all three dimensions.

Research Aim and Objectives

Aim

To evaluate the effectiveness of delta, lambda and strut plates in the management of sub-condylar fractures.

Objectives

To comparatively evaluate the effectiveness of delta, lambda and strut plates in the management of sub-condylar fractures assessed clinically and radiographically on parameters of mouth opening, occlusion, ease of plate placement and stability.

Methodology

An interventional study was conducted on 54 subjects who reported to outpatient department of Oral and Maxillofacial Surgery over a period of 3 years. The subjects were divided into 3 groups (A, B, C) respectively, each comprising of 18 subjects based on convenience sampling. Interventional groups received delta plate, lambda plate and strut plate according to the type of 3-D plates.

Results

In terms of preoperative and postoperative mouth opening and occlusion, the lambda and delta groups showed statistically significant improvement respectively. In terms of ease of plate placement, the Strut plate required a comparatively longer time for fixation.

Conclusion

To conclude, fixation of mandibular sub-condylar fractures using DELTA, LAMBDA and STRUT plates are comparable in their surgical outcomes with STRUT plates requiring a comparatively longer time for fixation.

Reference

1. Leiser Y, Peled M, Braun R, Abu-El Naaj I. Treatment of low subcondylar fractures—A 5-year retrospective study. *Int J Oral Maxillofac Surg* [Internet]. 2013;42(6):716–20.

S. No. 74**Evaluation of Bite Force in Patients Treated for Unilateral Mandibular Sub Condylar Fractures**

Dr. Akarsh R.

Sanjay Gandhi Institute of Trauma and Orthopedics

Abstract**Introduction**

Condylar fractures account for a large proportion (20–52%) of all mandibular injuries. The goal of treating these fractures is to restore the occlusion, thereby re-establishing the masticatory function as close to the patient's pre-trauma state.

Aims and Objectives

To evaluate the bite-forces in unilateral condylar fractures treated by open reduction and internal fixation [ORIF] compared with those managed by closed method. To assess and compare the difference in time taken by each group in achieving maximum bite-forces.

Methodology

Patients with unilateral mandibular sub condylar fractures were divided into two groups [20 each] using simple randomization method. Group-I—treated by open reduction and internal fixation using miniplates and screws. Group-II—closed method with intermaxillary fixation. Patients in both the groups were evaluated pre-operatively and postoperatively at 1 week, 1 month and 3 months for maximum bite-force achieved in the central incisor, pre-molars and molars region.

Results

Pre-operatively bite-forces on the unaffected site were significantly high than the affected site in both the groups, whereas no significant difference was observed in bite-force between the unaffected and affected site in both the groups post-operatively. The bite-forces achieved on both unaffected and affected sites in ORIF group were significantly high when compared to the closed group.

Conclusion

Maximum bite-forces differ significantly when the treatment is done by open method and the patients treated with open method will need lesser time to achieve the maximum bite forces thereby make an early return functionally.

Reference

1. Edward Ellis III, Gaylord S. Throckmorton, Bite Forces After Open or Closed Treatment of Mandibular Condylar Process Fractures, *J Oral Maxillofac Surg* 59:389–395, 2001.

S. No. 75**Efficiency of 2 mm Titanium Lambda Plate for ORIF of Sub-condylar Fractures**

Dr. Nikita Shabadi, Dr. Nikhila G.

Sanjay Gandhi Institute of Trauma and Orthopaedics, Bangalore

Abstract**Introduction**

Condylar fractures constitute, approximately 25–45%, among all mandibular fractures. Functional force applied to the mandible after a subcondylar fracture is significantly reduced and there are also significant neuromuscular adaptations that alter the forces exerted on the condylar neck during the healing phase after a fracture. Thus, it becomes necessary to accurately reduce the fracture fragments to its anatomical position to achieve desired outcome. Current controversy is about the number, type and orientation of plates to be used. Lambda plate mimics two miniplate technique with a straight segment parallel to the posterior border of ramus and an anterior curved arm aligned to sigmoid notch.

Aim

To evaluate clinical efficiency of 2-mm lambda plate for ORIF of condylar fractures in terms of surgical time, plate adaptability, mouth opening, restoration of occlusion and ramus height.

Methodology

A prospective study was conducted including 16 patients presenting with subcondylar fractures. Under general anaesthesia, surgical approach was employed and fracture fixation was accomplished using the 2-mm 7-holed titanium lambda plate. Clinical and radiological follow-up of patients was done at 1 week, 1 month and 3 months post-operatively.

Result

The mean surgical time was 110.5 min. Plate adaptability was good in 87.5% of cases, with excellent adaptability reported in one case. All the patients had preoperative restricted mouth opening and showed a statistically significant increase following surgery. 15 patients (93.8%) demonstrated deranged occlusion preoperatively with significant improvement postoperatively in all patients. Seven patients (43.75%) had deviation on mouth opening preoperatively and after ORIF, deviation on mouth opening significantly decreased.

Conclusion

We conclude that the use of 2 mm 7-hole lambda plate for sub-condylar fractures, represents a good option to obtain stable osteosynthesis, with less surgical time and complications.

S. No. 76**Hanger Plate Technique Versus Erich Arch Bar for Intermaxillary Fixation in Mandibular Fractures: A Comparative Study**

Dr. V. Ananthanarayanan

KLES Institute of Dental Sciences

Abstract**Introduction**

MMF serves as a cornerstone of maxillofacial reconstruction, providing a stable base from which facial form and function can be restored. A variety of MMF techniques have been described in

literature. Erich arch bar has numerous drawbacks thus need to overcome these drawbacks becomes necessary.

Aim

To evaluate and compare the advantages and disadvantages of Hanger plate technique over Erich arch bar and in mandibular fracture.

Materials and Methods

42 patients of mandibular fracture presented to our institution requiring open reduction and internal fixation under GA were randomly allocated to Group A and Group B. Group A received IMF with hanger plate method. Group B received IMF with Erich arch bar. The two groups were compared for time duration of intermaxillary fixation procedure, total duration of surgery, oral hygiene score, postoperative occlusion, and complications.

Results

The average time of Intermaxillary procedure, total duration of surgery, and wire prick injuries were more in Group B. Oral hygiene score was significantly better in Group A.

Discussion

B. van den Bergh et al. conducted the study of Conservative treatment of mandibular condyle fracture by Comparing Intermaxillary fixation with screws or Erich's arch bar and concluded that IMFS provide a superior method for IMF.

Conclusion

Hanger plate method of IMF is more safe and quick to perform in comparison to Erich arch bar. It allows maintenance of better oral hygiene than Erich arch bar.

S. No. 77

Incidence and Types of Ophthalmic Complications in Facial Trauma: A Prospective Study

Dr. Swapnil Mahavir Jain

Teerthanker Mahaveer Dental College, Moradabad, UP

Abstract

Introduction

The reported incidence of ocular injuries in the patients with fractures of facial skeleton ranges upto 9.6%. There is a recognized association between ZMC fractures and ocular injuries. These injuries have a high risk of threatening vision. In the emergency department, where ophthalmologist may not be available, OMF surgeons are also responsible for first ophthalmic assessments in such cases. Early diagnosis of potentially serious ophthalmic injuries is paramount not only in minimizing long term complications but also from a medico-legal standpoint.

Aims and Objective

To determine the incidence and types of ocular and extra-ocular complications, as assessed by ophthalmologist, in patients who had sustained facial fractures and who were under the care of a maxillofacial surgeons.

Materials and Method

A prospective study was done in patients sustaining Maxillofacial injury in TMDCRC and Hospital, Moradabad and Ophthalmic examination was done in all the patients. A thorough examination was done by Ophthalmologist in case of severe complications.

Result

The complications ranged from minor complications like subconjunctival haemorrhage to major complications like vision loss. Majority of the cases showed mild to moderate complications. Strong association was seen between ophthalmic complications and mid

facial fractures. Vision loss was the most severe complication reported.

Conclusion

A thorough ophthalmic examination should be carried out for every patient with maxillofacial trauma and suspected cases should be placed under observation so that immediate and active treatment can be sought.

S. No. 78

To Evaluate the Efficacy of Vacuum forming Splint and Arch Bar in Reduction of Mandibular Fractures: A Comparative Study

Dr. Farhan Khan

Al-Badar Rural Dental College and Hospital

Abstract

Introduction

Use of vacuum formed splints in the treatment of minimally displaced mandibular fractures might be more advantageous than arch bar fixation with ligature wires in relation to periodontal health, cost, chair side time and patient comfort. In this study we evaluated the efficacy of vacuum forming splint and arch bar in the reduction of mandibular fractures.

Aims and Objectives

To evaluate the efficacy of vacuum forming splint and arch bar in reduction of mandibular fractures.

Materials and Methods

20 patients with mandibular fracture, with a follow-up period of 1 month from December, 2017 to May 2019 et al.-Badar Dental College, Kalaburagi, Karnataka were selected. Group I consisted of 10 patients and were managed with modified vacuum formed splints. Group II consisted of 10 patients who were managed with conventional Erich arch bar.

Results

Post operatively 90% cases showed acceptable reduction as compared to splint group with 100%. 90% cases in the Arch Bar group showed good occlusion as compared to splint group which showed 80%. Splint group had a mean total chair side time of 18.9 min as compared to the arch bar with 71.3 min.

Discussion and Conclusion

In our series initial results were more satisfactory permitting us to conclude that Vacuum forming splint is a reliable option compared to arch bar in the management of treatment of undisplaced mandibular fracture as an IMF method.

S. No. 79

Management of Mandibular Condylar Neck and Base Fractures Using Strut Plates

Dr. Parul Gupta

Subharti Dental College and Hospital

Abstract

Introduction

Among condylar fractures, surgical treatment is most commonly done for subcondylar fractures. Although 2 plate system is most commonly recommended, specially designed single 3-dimensional plate have

been found to provide early functional rehabilitation with similar stability. Though studied in vitro, not much in vivo study has been done in clinical scenario.

Aim

To assess functional and radiographic outcomes of patients who underwent subcondylar fracture fixation with strut plate.

Method

10 patients presenting with subcondylar fracture requiring ORIF were included in this study from 2019 to 2020. Retromandibular trans-masseteric approach to expose the fracture site, and the fracture was stabilized using 3D titanium strut plates. Patients were evaluated regularly during 3 months follow-up on clinical parameters, like occlusion, mouth opening, range of jaw movements, surgical accessibility, facial nerve weakness and radiologic parameters, such as fracture alignment, plate fracture, plate bending, screw loosening, secondary displacement of the condylar fragment, and any deviation.

Result and Conclusion

This study is a preliminary effort to evaluate the efficacy of strut plates in the management of condylar. There was an improvement in mouth opening and occlusion in the immediate postoperative period. The surgical accessibility was difficult due to large size of the plate and there was difficulty in fixation of screws in the proximal segment. Post-operative infection was observed in 3 cases. Transient weakness of facial nerve was observed in all the cases, which recovered within 3 months post-operatively. None of the patients had a device failure during the six-month follow-up period.

S. No. 80

A Preliminary Study to Evaluate the Efficacy of 3D Titanium Locking Miniplates and 2D Locking Miniplates in the Treatment of Mandibular Fractures

Dr. Prashansa Mehta

Teerthankar Mahaveer Dental College and Research Center

Abstract

Introduction

The most common facial fractures are mandibular fractures, accounts for 61% due to its prominent position, followed by maxilla 46%, zygoma 27% and nasal bones 19.5%. Popular methods of mandibular fracture fixation are rigid and semi-rigid fixation techniques that requires precise adaptation and securing with screws. Miniplates have been very popular and common implant used in facial fracture fixations for quite some time. But common complications with miniplates were hardware loosening due to movements at the junction of plate and screw head. To overcome this, locking miniplates were introduced which were successful but demanded precision surgery. A newer 3D miniplates were adapted in mandibular fracture treatment which countered torsional forces effectively, but restricted to specific site of fractures. Therefore this study attempts to understand the utility of these two RIF techniques for surgical ease and clinical outcome assessment.

Aim and Objectives

This preliminary study is to evaluate efficacy of 3D locking versus 2D locking miniplate for mandibular fractures in terms of variation of pain, swelling, stability, biting force efficiency.

Materials and Methods

10 Patients in each group (I: 3D Locking plates, II: 2D locking plates), age group 18–60 years, follow up at 1st week, 1st month and 3rd month. Includes surgical armamentarium and Gnathodynamometer.

Results

Group I showed better results than Group II.

Reference

1. Ramakrishna S. Shenoji et al.; 3D Locking plate and conventional miniplates in treatment of mandibular anterior fractures; *Annals of Maxillofacial surgery*; 2018; 8:73–77.

S. No. 81

Efficacy of Retromandibular Transparotid Approach for Subcondylar Fractures of Mandible

Dr. Rachanvale Hafsa Parveen

Government Dental College and Hospital, Kadapa

Abstract

Introduction

Condylar fractures account for 17.5–52% of mandibular fractures. Despite abundant research, number of controversies surround management in adult patients like value of open or closed treatment, which approach is best for ORIF, type of hardware to be used. Despite of various approaches, clinician is still faced with dilemma concerning optimal approach. Retromandibular transparotid approach has been most popular approach, as it involves minimal working distance between incision and fracture and low incidence of transient facial nerve injury.

Aims and Objectives

To evaluate the efficacy of retromandibular transparotid approach in treatment of subcondylar fractures. Objectives are to assess the time of surgery, facial nerve injury, parotid fistula formation, maximal interincisal opening, lateral excursion, protrusive movements, occlusion, scar perceptibility.

Materials and Methods

This clinical study included 10 patients, aged between 20 and 40 years who reported to department of OMFS, GDCH, Kadapa. Following surgery all patients were evaluated with above stated parameters for 3 months.

Results

Time of surgery ranged from 42.60 to 52.40 min. Significant increase was seen from preoperative to postoperative 3 months visit in maximal interincisal opening, laterotrusive, protrusive movements. Stable occlusion was found at all follow ups. Parotid fistula formation occurred in 1 patient. No incidence of facial nerve injury and scar was minimally perceived by all patients.

Conclusion

Retromandibular transparotid approach for subcondylar fractures was found to be effective, feasible and safe technique allowing good access to fracture site within short surgical time period, also gives esthetic, functional results with low morbidity.

References

1. A.P. Mohan et al., Comparison of preauricular approach versus retromandibular approach in management of condyle fractures. *J. Maxillofac. Oral Surg.* (Oct–Dec 2012); 11(4):435–441.
2. Bae-Kyung Kim, DMD, et al., Usefulness of retromandibular transparotid approach for condylar neck and base fractures. *J Craniofac Surg* 2012; 23:712–715.

S. No. 82
Surgical Intervention or Not: A Maxillofacial Surgeon's Dilemma

Dr. R. Priyadharshini

Tamilnadu Government Dental College and Hospital, Chennai

Abstract

Background

The dislocation of temporomandibular joint (TMJ) is a clinical condition in which the head of the condyle is displaced out of the glenoid fossa. Bilateral superolateral dislocation of mandibular condyle is quite rare and is often misdiagnosed. Treatment modalities for superolateral dislocation include closed and open reduction. Due to the traction effect of masticatory muscles, both open and closed reduction of bilateral superolaterally dislocated condyle becomes a challenging task.

Aims and Objectives

The purpose of this paper is to describe 2 cases of superolateral dislocation of mandibular condyle and highlight the customised management protocol used rather than a standardized one.

Materials and Methods

Post traumatic cases of superolateral dislocation of condyle were taken up. One case was managed by open reduction of bilateral mandibular condyles and the other was managed conservatively.

Results

Both the cases were managed successfully and yielded optimum results without any postoperative complications. Differences in the management strategies warranted for individual cases of superolateral dislocation were observed.

Discussion

Bilateral superolateral dislocation of intact mandibular condyle is often neglected yet requires thorough physical and radiological examination. Early diagnosis and management are strongly emphasized as prolonged dislocation can make reduction more difficult leading to unsatisfactory results.

Conclusion

Owing to the rarity and unusual clinical course, the decision regarding best treatment modality is debatable. There should be a periodical shift in the thought process of oral and maxillofacial surgeon in treating TMJ dislocation. Our experience mandates each case to be treated according to the clinical scenario.

S. No. 83
Chainsaw Injuries to the Maxillofacial Region: A Case Series

Dr. Sankar Jayaram

KVG Dental College and Hospital

Abstract

Anatomical complexity and high degree of exposure makes the maxillofacial region more prone to injuries. Road traffic accidents being the most common cause, geographical diversity and socioeconomic status leads to many etiological factors. The percentage of work related injuries range from 1.6 to 9%. Professions requiring a considerable deal of physical exertion or the use of tools and machines have proven to be far more hazardous. The usage of chainsaw a heavy machinery handy tool nowadays in private industrial and household setup has led to increase in incidence of maxillofacial injuries. Usage under improper guidelines and without

adequate safety protocols makes these handy machines dangerous. According to Hachl et al., work related injuries are associated with three causes: human error, machinery or tool defects and the incorrect use of equipment because of lack of training or instructions. The mechanism of chainsaw injury suggests a shearing or tearing injury rather than an impact or contusive injury. For these types of injuries, there are no standard therapy guidelines in the literature; nonetheless, surgical debridement of necrotic tissue, wound revision, and primary closure are routinely used. We discuss a case series of three work-related accidents that resulted in significant soft tissue avulsion injuries along with review of literature and discussion of their management in this presentation. This paper aims towards creating awareness in management of injuries by heavy machinery following proper safety manuals, under correct guidelines and principles which is less usually reviewed in medical literature.

S. No. 84
Management of Maxillofacial Injuries Caused by Animal Attack: Our Experience

Dr. G. Nikhila

Sanjay Gandhi Institute of Trauma and Orthopedics

Abstract

Animal bites are a significant community health problem, with most cases being bites coming from dogs, cats and in rare cases, wild animal attacks. These may present as puncture wounds, abrasions, tears, avulsions, or a combination of these. The relative bluntness of the teeth and force of attack also increases the probability of a crush injury resulting in devitalization of tissues. The clinical presentation of these injuries varies according to the animal, and so does the infection, as such injuries are usually polymicrobial. These wounds have always been considered complex injuries, due to the functional and cosmetic nature of the area, contaminated with a unique polymicrobial inoculum. The old school of thought proposed allowing the wounds to heal by secondary intention, however the philosophy regarding the management of these injuries has undergone a transformation to a more aggressive approach that augments the aesthetic results by primary closure. In this presentation, we are presenting a case series of animal attack injuries that reported to our institution and our treatment protocol which we followed to manage these cases.

Reg. Num: 1242

S. No. 85

Surgical Management of Zygomatic Complex Fractures: Our Experiences

Dr. Deepashree H. Kambalimath

College of Dental Sciences, Davangere

Abstract
Introduction

Zygomatic bone is essential for maintaining facial contour—cheek prominence and orbital integrity.

Aim and Objectives

To analyse the incidence, aetiology, surgical management and complications encountered in the treatment of ZMC fractures in our super-speciality hospital, and to compare the number and location of fixation points and surgical access in our patient cohort with the literature.

Materials and Method

Retrospective analysis of all operative cases of ZMC over a 3-year period (2017–2020).

Results

Isolated ZMC fractures accounted for 43%, 33% with associated injuries, 13% isolated arch while 11% accounted isolated infraorbital rim fracture. Most common clinical findings were subconjunctival ecchymosis (71%), flattening of cheek (39%), malocclusion (22%) and so on. Buccal sulcus incision (66%) was mainly used, followed by upper blepharoplasty incision (59%). Depending on degree of displacement of fracture one-point fixation (8%), two-point fixation (30%) or three-point fixation (27%) was performed. About 33% of cases were conservatively managed and followed up on regular intervals. Lymph oedema, infra orbital paraesthesia, temporary blindness, diplopia, hemianopsia were some of the complications encountered which were managed successfully and followed up.

Conclusion

ZMC fractures are most commonly occurring midface fractures with variable etiologies. The most common ZMC fracture pattern was tripod type of fracture. Greater portion of the patient were treated with two-point fixation. Most of the complications were due to the impact and velocity of trauma.

S. No. 86**The Evaluation of 3-D Strut Plates in the Management of Mandibular Subcondylar Fractures**

Dr. Aishwarya Jayachandra

A.J. Institute of dental sciences

Abstract**Background**

Mandibular fractures are frequent in facial trauma with an incidence of 35.54–44.2%. The frequency of condylar fractures accounts for more than a third of all mandibular fractures (25–45%). The management of mandibular subcondylar fractures has always been a topic of debate with a wide variety of treatment options available. 3-Dimensional plates have been the most recent and evolving treatment modality owing to its superior stability and minimal hardware.

Aim

To evaluate the use of 3-dimensional Strut plate in the management of mandibular subcondylar fractures.

Methodology

15 patients diagnosed with mandibular subcondylar fractures were selected after fulfilling the inclusion criteria. All the patients underwent open reduction and internal fixation with 2 mm 3-D Strut plates under general anaesthesia with informed consent. Postoperatively, patients were assessed at immediate post-operative period, 1 month and 3 months for stability of the plate, occlusion, anatomic reduction, hardware issues and associated complications.

Results

In terms of anatomic reduction, maximal mouth opening and occlusion, all the patients presented with good outcomes postoperatively. However, the intraoperative time taken for fixation of the strut plate was a moderate duration of 30–40 min in eleven out of fifteen cases. The difficulty of plate adaptation was found to be moderately difficult

in seven cases, difficult in seven other cases and very difficult in one case.

Conclusion

3-Dimensional Strut plate is an effective modality of treatment for mandibular subcondylar fractures, but with a major drawback of difficult adaptation and hence prolonged duration of fixation.

Category: Facial Aesthetics and Orthognathic**S. No. 87****Correction of Facial Disproportions in Non syndrome Cases**

Dr. N. Gnapika

Mamata Dental College

Abstract**Introduction**

Facial symmetry is a key determinant for assessing facial attractiveness and expressions. It is the harmony, symmetry and balance of each segment which contributes towards the total beauty of the face. Significant facial asymmetry results not only in esthetics but also in functional impairment. Multifactorial etiologies like developmental, traumatic, pathological and functional morphology along with diagnostic aids allow for accurate diagnosis and tailored treatment plan.

Aims and Objectives

The principal aim of the presentation is to illustrate diagnostic and surgical management aspects of various facial disproportions and their corrections.

Materials and Methods

Facial asymmetry assessment comprises patient's need, clinical examination and diagnostic imaging. Occlusal splint, model surgery being performed for pre-operative assessment.

Results

Various surgical treatment modalities for significant correction of facial disharmony has given satisfactory results in achieving good post-operative stability, functional rehabilitation followed by minor dental corrections.

Discussion

Skeletal deviation of greater than 3 mm required in order to render asymmetry visible in individual's face. According to Severt et al. epidemiological studies show clinically found facial asymmetry range from 12 to 37%, radiologically close to 50%. More associated with class III and less frequently class II malocclusion stated by Good et al.

Conclusion

A profound knowledge of facial asymmetry is essential to critically analyse all the features involved and accurately quantify magnitude of disproportions, which would help us achieve satisfactory results in esthetics and function.

S. No. 88**Bi-Jaw Surgery: Indications and Challenges***Dr. Ganapati L. Dharmashala**Krishnadevaraya College of Dental Sciences and Hospital***Abstract**

Orthognathic surgery is a procedure in which there is a combination of orthodontics and surgery, so as to align the maxillary and mandibular dental and skeletal class III malocclusion of high severity. A meticulous analysis of pre-treatment records followed by a surgical visual treatment objective is needed in planning the type of surgical technique. In case of severe skeletal discrepancies, bi-jaw surgery is usually recommended taking into consideration of the anatomical restraints.

S. No. 89**Effect of Mandibular Setback on Oropharyngeal Airway: A 3D Evaluation***Dr. Aparna S. Nair**Kmct Dental College Calicut***Abstract****Background and Objectives**

The effects of skeletal movements and changes in position of hyoid bone and tongue on oropharyngeal airway after orthognathic surgery have always been a keen topic of interest. The postural response of mandibular setback is widely studied in literature due to its relation with sleep disordered breathing like obstructive sleep apnea. Most of these studies highlighted the use of lateral cephalograms for assessment of airway. To overcome the limitations of cephalograms a three-dimensional evaluation of pharyngeal airway was suggested. The purpose of this study was to evaluate the changes in airway space before and after bilateral sagittal setback surgery in skeletal Class III patients using magnetic resonance imaging (MRI).

Methods

Study included 20 patients in whom mandibular prognathism was corrected surgically by setback surgery over a period of 1.5 years. Questionnaire assessing patient's clinical symptoms before and after surgery was performed. MRI a week before and 2 months post-operatively were performed.

Results

Observations and analysis depicted highly significant reduction in pharyngeal airway post setback ($p < 0.001$) though a definitive pattern could not be stated.

Interpretations and Conclusions

Reduction in airway post-operative was more volumetrically significant than clinical presentations. The immediate post-operative discomfort can be attributed to factors like oedema; patients were asymptomatic 1 month post-operatively. According to this study average mean of 63.35 ± 7.37 mm setback doesn't affect the airway of the patient.

References

1. Kawakami M, Yamamoto K, Fujimoto M, Ohgi K, Inoue M, Kirita T. Changes in tongue and hyoid positions, and posterior airway space following mandibular setback surgery. *Journal of Cranio-Maxillofacial Surgery*. 2005;33(2):107–10.

S. No. 90**Sequencing: The Dilemma in Two-Jaw Orthognathic Surgery***Dr. P. Pranave**Bharati Vidyapeeth Dental College and Hospital***Abstract****Introduction**

Bimaxillary surgery is often indicated to correct a wide range of maxilla–mandibular malrelationships. The traditional method of performing bimaxillary surgery has always been to reposition the maxilla first, stabilize it, and then reposition the mandible. However, rigid internal fixation has allowed a change in this classical sequencing, whereby, the mandible is first repositioned and stabilized, followed by repositioning the maxilla.

Method

A 25-year-old female patient, presenting a chief complaint of forwardly placed lower teeth and poor facial appearance, came to seek treatment. She had skeletal class III and dental class III malocclusion. Bilateral sagittal split osteotomy (BSSO) and LeFort I Osteotomy was planned with the mandibular first approach. All the osteotomized segments were stabilized using rigid internal fixation. The surgical splint was positioned, occlusion was confirmed and maxillary–mandibular fixation (MMF) was achieved to accomplish satisfactory facial profile.

Result

A symmetrical mandibular set back of 8 mm was achieved with the help of BSSO. Maxillary advancement and inferior repositioning amounting to 3 mm each was attained through LeFort I osteotomy.

Discussion

Bimaxillary orthognathic surgery must be properly coordinated with orthodontics and other dental treatments to achieve good overall results. Although the traditional maxilla–first approach is performed routinely, we describe a case where mandible was first repositioned and stabilized. Either of the surgical sequences can produce similar outcomes when properly planned and executed in the vast majority of bimaxillary cases.

Reference

1. Béziat JL, Babic B, Ferreira S, et al.: Justification for the mandibular-maxillary order in bimaxillary osteotomy. *Rev Stomatol Chir Maxillofac* 110:323, 2009

S. No. 91**Art and Science of Facial Feminization Surgery***Dr. Punit Dubey**Safdurjung Hospital and VMMC, New Delhi***Abstract**

Facial feminization surgery (FFS) is a group of cranio-maxillofacial surgical procedures to change features of masculine face to that of a feminine face. FFS is generally performed on transexual women and those who have gender dysphoria. Few non transexual women also prefer facial feminization surgical procedures if they feel to have masculine facial characteristics. Patients may opt to undergo FFS before or after gender reassignment surgery which helps them transforming as a female and amalgamate in society. Different facial contouring and adjuvant procedures are carried out to feminize the

face. These include hairline reduction, forehead contouring, rhinoplasty, cheek bone augmentation, buccal pad of fat removal, fat grafting, lip lift, mandibular angle reduction, narrowing of chin and thyroid shave. The future for facial feminization surgery in India holds an important role for cranio-maxillofacial surgeons thus requiring further consensus, training and research.

Reference

1. K. Altman: Facial feminization surgery: current state of the art. *Int. J. Oral Maxillofac. Surg.* 2012; 41: 885–894

S. No. 92

Effect of Proximal Segment Rotation on Relapse and Stability After BSSO: A Comparison of Mandibular Setback and Advancement

Prof. Dr. Thomas Zachariah

Meenakshi Ammal Dental College and General Hospital, Chennai

Abstract

Introduction

The proximal ramal segment plays a crucial role in relapse and stability after bilateral sagittal-split osteotomy of the mandible. After osteotomy, the free proximal segment is influenced by the vector pull (direction and magnitude of force) of the muscles of mastication like the masseter, medial pterygoid, and temporalis.

Aims

This study aims to evaluate the role of rotational influences of the proximal segment on relapse and stability after BSSO.

Methodology

This prospective study was carried out on 26 patients, 13 of whom underwent setback BSSO and 13 advancement BSSO, using a standardized osteotomy technique. Fixation was achieved with a single 4-hole plate and monocortical screws. Lateral cephalograms were obtained preoperatively and postoperatively at 1 month and 9 months, respectively. Cephalometric values like relapse at point B (Ptm-B), ramal rotation angle (N–Ar–Go), gonial angle (Ar–Go–Me), and mandibular plane angle (HP–MP) were calculated were calculated at all 3 intervals.

Results

The amount of mandibular setback ranged from 6 to 12 mm while the amount of advancement ranged from 5 to 13 mm. The factors that were found to be highly significant in influencing relapse were the magnitude of setback, the mandibular plane angle, clockwise rotation of the proximal segment, and the vertical bony step (VBS) created between the distal and proximal segments.

Conclusion

Overall, mandibular advancement was found to be more stable than mandibular setback. The magnitude of relapse correlated positively with the amount of setback. The larger the gonial angle and magnitude of setback, the larger the VBS. An attempt to align the mandibular lower border to minimize VBS causes clockwise rotation of the proximal segment. Intraoperative clockwise rotation of the proximal segment stretches the pterygomasseteric sling, in turn, leading to relapse.

S. No. 93

Evaluation of Stability and Esthetic Outcome Following Rigid Fixation of a New Sagittal Genioplasty Technique: A Clinical Study

Dr. Subia Ekram

Rajendra Institute of Medical Sciences

Abstract

Background

This study aims to evaluate the skeletal stability and clinical outcome following rigid fixation in this new sagittal genioplasty technique. This technique also aids in correcting mild to moderate breathing irregularities. Routine genioplasty procedure is often curvilinear, requires lower border extension below and behind the mental foramen, which after advancement has a tendency to produce step deformity, butt contact, hence non-union, instability and increased relapse tendencies. The present technique is aimed to study the new sagittal genioplasty technique and its efficacy to overcome the above mentioned drawbacks of conventional genioplasty.

Methodology

A total of 10 patients were included in this study. The comparative analysis of the displacement of the chin in vertical and horizontal directions following surgery was evaluated by measuring the difference between preoperative, immediate post-operative, 3 and 6 months post-operative on lateral cephalometric radiographs.

Results

The study results showed an advantage over conventional technique in terms of esthetics outcome (no jowl), easy to perform without damaging the mental nerve, superior healing with less relapse and better surface area contact.

Conclusion

In our study, the new technique of sagittal genioplasty overcomes the disadvantages of the conventional genioplasty. However, this technique is best suited for patients who require straight or moderately vertical augmentation advancement genioplasty and is not suitable for asymmetry corrections. I.e. centering genioplasty and double sliding genioplasties.

Keywords Sagittal advancement genioplasty, Modified genioplasty

S. No. 94

Skeletal Relapse after Bilateral Sagittal Split Osteotomies (BSSO) Setback: With and Without Post-operative Chin-cup Therapy

Dr. Divya Chadda

Dr. R. Ahmed Dental College and Hospital, Kolkata

Abstract

Introduction

There is a significant chance of skeletal relapse after mandibular setback in BSSO surgeries. Chin-cup appliance is used to redirect the growth direction of mandible.

Aims and Objectives

To find out the effect of Chin-cup therapy after BSSO setback surgeries by means of cephalometric evaluation.

Materials and Methods

A prospective study, comprising of 34 patients (mean age 31.27 ± 2.53 years, male:female = 1:1.4), with skeletal class III malocclusion treated with ortho-surgical treatment involving BSSO

setback surgery, were divided randomly into 2 equal groups. Post-operative chin-cup therapy was given to one of the groups starting after 3 months of the surgery. Skeletal relapse was compared for both the groups through cephalometric variables (pogonion and point B) at the end of 3rd and 12th month post-operatively. Statistical analysis was done. Ethical clearance was obtained.

Results

Skeletal relapse at the end of the 3rd month was similar for both the groups. But there was a significantly lower skeletal relapse in the group using Chin-cup compared to the other group 12 months post-operatively.

Discussion

The restrictive action of Chin-cup on the mandible is effectively able to reduce the amount of skeletal relapse after BSSO setback.

Conclusion

Post-operative chin-cup therapy may act as a vital tool to reduce skeletal relapse in patients undergoing BSSO setback surgeries.

Reference

1. Mobarak KA, Krogstad O, Espeland L, Lyberg T. Long-term stability of mandibular setback surgery: a follow-up of 80 bilateral sagittal split osteotomy patients. The International journal of adult orthodontics and orthognathic surgery. 2000 Jan 1;15(2):83–95.

S. No. 95

Maxillo-Mandibular Rotations: Paradigm Shift for the Perfect Pitch

Dr. Aafreen Aftab

Rungta College of Dental Sciences and Research, Bhilai

Abstract

Conventional orthognathic planning relies exclusively on linear movements as much as the occlusion permits. Rotation is differential vertical movements of the maxillo-mandibular complex, bringing about sagittal changes. The concept of rotation can be used in occlusally-limiting cases wherein the desired skeletal movement is further away from the dento-alveolar segments. This study analyses 16 cases of maxilla-mandibular rotation (8 requiring clockwise rotation and 8 requiring counter-clockwise rotation) to assess the stability, aesthetic outcome, airway and TMJ function. Of the 16 patients, 11 were orthodontically camouflaged, 4 had undergone orthodontic decompensation and 1 underwent surgery-first with post-op orthodontics. Virtual surgical planning was carried out for each patient in conjunction with the use of semi-adjustable articulators. All the patients underwent Lefort I osteotomy (high Lefort I osteotomy in clockwise rotation patients), bilateral sagittal split osteotomy and genioplasty procedures. The minimum follow-up period of each case was 8 months. The pre- and post-op lateral cephalograms and OPG, clinical examination data and clinical photos were analysed by an independent observer. Patient satisfaction was also analysed using a questionnaire to assess the change in aesthetic and functional factors. The results concluded that in terms of stability, 2 patients who underwent clockwise rotation and 2 patients who underwent counter-clockwise rotation showed marginal relapse of the achieved maxillary and mandibular movements respectively. The aesthetic outcome was satisfactory from both the patient and observer standpoints. Clockwise rotation didn't show any significant changes in the airway, however those patients who underwent counter-clockwise rotation showed significant increase in the airway space.

Conclusion

When linear movement is restricted by prevailing occlusion, clockwise rotation of MMC brings the maxilla forward significantly and counter-clockwise rotation will advance the mandible, impacting the overall esthetic outcome.

S. No. 96

Role of Platelet Rich Fibrin in Neurosensory Recovery Following Bilateral Sagittal Split Osteotomy

Dr. Saiswarup Badrinath

A B Shetty Memorial Institute of Dental Sciences

Abstract

Neurosensory disturbance (NSD) is common following bilateral sagittal split osteotomy (BSSO) surgery. The aim of this study was to evaluate the effect of platelet-rich fibrin (PRF) on neurosensory recovery following BSSO. This split-mouth, randomized clinical trial was performed on patients undergoing BSSO. PRF was applied to one side after the osteotomy and before fixation. The other side served as the control. The two-point discrimination test, monofilament test and a brush directional stroke test were used to assess NSD at 1, 6 and 9 months postoperative. Self-reported paraesthesia was documented using a 10-point visual analogue scale (VAS). Fifty-four patients were included in the study. The results of the two-point discrimination test, monofilament test and the number of subjects who reported a true direction in the brush directional stroke test differed significantly between the treatment and control sides ($P = 0.001$). The recovery of NSD was better on the treatment side than on the control side ($P = 0.001$). In this study, it was observed that PRF accelerated the recovery of IAN following BSSO.

S. No. 97

Evaluation of Post-operative Condylar Sag by Comparing Pre-operative CT Scan, Virtual Surgical Planning and Post-operative CT Scan

Dr. Ansari MD Fakhruddin

Govt. Dental College, trivandrum

Abstract

Introduction

As modern technologies advanced, importance of presurgical planning, accurate execution in operation room and post-surgical scrutinisation of planned surgeries became important part to improve surgical results, to diagnose inaccuracy and provide its solutions.

Aim and Objective

To evaluate post-surgical condylar sag in orthognathic and TMJ surgeries and also to access accuracy of surgical movements.

Materials and Methods

Pre and postsurgical 3D CT tomographs, scanned 3D casts and 3D software for VSP and to evaluate.

Results

Superimposition of pre and post-operative DICOMs to find out even minor discrepancies and its sequels on our results.

Discussion

Use of 3D software in orthognathic and joint replacement surgeries is common in day to day practise. All these planned surgeries require accurate execution and precision to achieve the aimed goal. Post-operative DICOM superimposition provide us to evaluate and diagnose accuracy of surgical movements and its shortcomings.

Conclusion

Pre and post-surgical DICOM superimposition serves great purpose in Orthognathic and TMJ Replacement cases not just to diagnose accurate implication of planned procedures but also to evaluate and solve shortcomings of the procedures.

S. No. 98**Lower Lip Cheiloplasty: Aesthetic Correction: A Case Report**

Prof. Dr. Amman T. Vignesh

RVS Dental College and Hospital

Abstract**Introduction**

Like any procedure, many nuances exist from surgeon to surgeon. The basic protocol followed are very similar, and involve partial excision of mucosa and muscle tissue followed by closing the defect to change the posture of the lip. Not many patients approach for lip augmentation based on pure esthetic consideration, and is thus the reason of presenting on this topic.

Aims and Objectives

To address the cosmetic concerns of the patient and boost their self-confidence.

Material and Methods

Single operated case, done under Local Anaesthesia.

Results

All aesthetic concerns of the patient got addressed. Lower Lip Sagging corrected and the patient is quite happy with her augmented Lip morphology.

Discussion

After suitable tissue is removed, the wound margins can be temporarily approximated with tissue forceps to grossly anticipate the surgical result. This is not entirely accurate, owing to the effects of injected local anaesthesia and surgical edema.

Summary and Conclusion

Although more tissue can be removed and the result adjusted, it is always better to err on the conservative side, especially for the novice surgeon.

S. No. 99**Creating Almond Shaped Eyes in the Asian Indian Population: A Unique, Easily Reproducible, Surgical Technique**

Dr. Monika Surana

K. M. Shah Dental College and Hospital

Abstract**Introduction**

The shape of the eyes can significantly alter the way a person's face looks. With the proliferation of the internet, more and more people desire cosmetically appealing eye shapes. Cosmetic lateral

canthoplasty is a procedure to enhance the shape of the eyes. It involves a lateral tarsal strip canthoplasty and canthopexy to create an upward slant of the lateral canthal region. Here we present our unique version of the lateral tarsal strip and Canthoplasty technique, to create symmetrical, almond shaped eyes.

Methods

30 patients (March 2015–April 2020) were treated to cosmetically change their eyes' shape. They presented with complaints of not being happy with the symmetry and shape of the eyes. Their ophthalmic examination was done to rule out any vision abnormality prior to surgery. All the patients underwent bilateral cosmetic canthoplasty surgery with the lateral tarsal strip technique. Post-operatively, the evaluation of the eyes was performed.

Results

30 patients (10 males; 20 females) were enrolled with mean age of the patients was 25.5 years. The follow up periods ranged between 6 months and 2 years. All the patients presented with satisfactory and aesthetically acceptable results. The bilateral symmetry of the eyes was maintained. The pre-operative underwhite scleral show, if present, was also corrected and symmetrized in between the eyes in all the cases where present.

Conclusion

Lateral tarsal strip and canthoplasty in the Asian Indian ethnic population is a unique procedure that makes the eyes appear almond shaped. It helps give the eyes a softer look by creating almond shaped eyes and thereby makes the face look more attractive. This procedure is a good and convenient method to perform and can be done as an out-patient procedure. We describe a unique technique to create almond shaped eyes in the Asian Indian population.

S. No. 100**Subcision: A Comparative Study With and Without PRP**

Dr. Tania Maskara

K.L.E. Society's Institute of Dental Sciences and Hospital

Abstract**Introduction**

Scars contribute substantial burden towards global morbidity. Acne scars, has become a cause of concern among Surgeons as well as dermatologists.

Aim

To compare the results of subcision with and without PRP in depressed scars measuring 1–3 cm.

Material and Methods

Comparative study was done on 32 patients (20–45 years), with depressed facial scars, randomly divided into 2 groups. Group A—subcision of depressed scar, Group B—subcision followed by PRP injection. Results were assessed objectively by measuring the length and depth of scar pre and post treatment at one month interval for 3 months. Statistical analysis done using Mann–Whitney test, Wilcoxon signed rank test, chi square test, McNamara's test. Level of significance (P value) was set at $P < 0.05$.

Results

There was significance difference in between the groups. Length of scar for Group A (p value ≤ 0.007), Group B (p value ≤ 0.001) and depth for Group A (p value ≤ 0.01), Group B (p value ≤ 0.001). Group B showed better results among the groups.

Discussion

Subcision is a simple procedure for atrophic scars, first described by Orentreich. Nitika et al. used PRP in the treatment of depressed facial

scars with favourable results. Adam et al. in his study demonstrated 50% improvement of depressed scars after subcision.

Conclusion

Our study results showed subcision is suitable for different types of depressed scars and is more effective when followed by injection of PRP, without any risk.

S. No. 101

Non-surgical Management of Excessive Gingival Display Using Botulinum Toxin-A: A Clinical Study

Dr. Chrisie Kshamina

Thai Moogambigai Dental College and Hospital

Abstract

Introduction

Excessive gingival display (gummy smile) is a condition where exposure of gingiva during smile is excess. Treatment methods range from non-surgical to surgical approaches. Botulinum toxin-A injection, is one of the non-surgical treatments used to treat gummy smile.

Aim and Objectives

The study is aimed to reduce excessive gingival display non-surgically with the use of BTX-A and to achieve desirable esthetic results.

Materials and Methods

Fifteen patients were included in the study aged between 18 and 40 years. Ethical committee clearance was obtained. BTX-A (Botox®) 100 units is diluted with 2.5 ml of 0.9% sodium chloride. The patients were injected with BTX-A in the YONSEI TRIANGLE to reduce excessive gingival display.

Results

Decrease in gingival exposure was significant at 2 weeks of about 3.5 ± 1 mm and lasted for up to 4 months. No difference in the measurement of gingival display post injection during 5th and 6th month.

Discussion

BTX-A in gummy smile reduces muscle hyperactivity by blocking release of acetyl choline. The effects of BTX-A lasted for 4 months and gradually reduced resulting in reversal of gingival display during maximum smile.

Conclusion

The study confirms that BTX-A was effective in correction of gummy smile, produced desired results and patient satisfaction. Use of BTX-A is a harmless non-surgical therapy that can improve smile esthetics.

References

1. Polo M (2005) Botulinum toxin type a in the treatment of excessive gingival display. *Am J Orthod Dentofac Orthop*
2. Mazzuco R, Hexsel D (2010) Gummy smile and botulinum toxin: a new approach based on the gingival exposure area. *J Am Acad Dermatol*

S. No. 102

Reshaping the Face: Orthomorphic Correction for Mandibular Dymorphology post Unilateral TMJ Ankylosis

Dr. Varun Shukla

JSS Dental College and Hospital, Mysuru

Abstract

Introduction

Mandibular dymorphology is predominantly a consequence of uncoordinated growth deficiency or excess and the outcome of a compensatory deformation. It can also result from unilateral temporomandibular joint ankylosis, trauma, condylar hyperplasia, and tumors. Unilateral temporomandibular joint ankylosis during active growth period, if left untreated, is usually complicated by secondary changes in the morphology of the mandible and surrounding structures. The use of orthognathic surgery in correcting the facial deformities arising from discrepancies in spatial relationships between the jaws is well established, but, is unable to correct deformities arising from an altered morphology. The surgical correction using orthomorphic principles have been used to restore the morphology without affecting the status of occlusion.

Materials and Methods

Three patients having mandibular dymorphology secondary to unilateral temporomandibular joint ankylosis were treated using orthomorphic surgery. The patients were evaluated for outcomes in terms of neurosensory changes after surgery, assessment of mouth opening before and after surgery, postoperative assessment of mandibular symmetry, and postoperative complications.

Results

The orthomorphic correction technique can be used in correcting cases with mild to moderate mandibular dymorphology.

Discussion

Good to moderate asymmetry correction was noted in all of the cases with due consideration given to postoperative oedema. Mental nerve paraesthesia was noted in one patient. No postoperative complications were reported. Orthomorphic correction is the effective treatment of the hard tissues that brings about an evident change, and soft tissues usually adapt following the skeletal correction. It also provides a stable single-stage treatment option for complex mandibular dymorphic entities.

S. No. 103

Evaluation of Efficacy of Temporalis Myofascial Flap in Maxillofacial Reconstruction and Interpositional Material in TMJ Ankylosis

Dr. Sunitha Gudivendala

Govt Dental College and Hospital, RIMS

Abstract

The aim of the study is to evaluate the success of temporalis myofascial flap in maxillary reconstruction and as interpositional material in TMJ ankylosis. The objectives are to assess temporalis myofascial flap necrosis, maximal interincisal opening, facial nerve injury using the house backmann scale, auriculotemporal nerve injury, donor site morbidity. The clinical study included a sample size of 10 patients reported to the Department of Oral and Maxillofacial surgery, GDCH, Kadapa. Out of ten patients, 5 patients required

maxillary resection followed by immediate reconstruction with temporalis myofascial flap were male with a mean age of 47.20 ± 12.56 years and 5 patients with TMJ ankylosis of which 1 was male (16.67%) and 4 were female (83.33%) with a mean age of 23.80 ± 12.15 years. The temporalis myofascial flap success rate is of 100%. The mean maximal inter incisal opening at 6 months postoperatively was 35.00 ± 5.00 mm. Incidence of transient Grade-II facial nerve injury involving temporal branch in one patient (10%). 100% absence of auriculotemporal nerve injury. Temporal Hollowing was mild in 3 patients (60%). 100% absence of infection at donor site.

S. No. 104
Comprehensive Management of Parry Romberg Syndrome

Dr. Aastha Vaishnav

Rungta College of Dental Sciences and Research

Abstract

Significant facial asymmetry causes both functional as well as aesthetic problems, so its underlying cause should be investigated. Aetiology can be congenital disorders, acquired diseases, traumatic and developmental anomalies. Management of facial asymmetry first aims at correcting the underlying causes after detailed assessment it can be planned for orthognathic and orthomorphic cosmetic surgeries. We hereby describe a case of facial asymmetry secondary to Parry Romberg syndrome, it is a rare disorder with an unknown etiology. After self limiting stabilization, various reconstructive options can be used to restore facial asymmetry. In this case bony correction was achieved by using distraction, soft tissue correction was done by using autologous dermis fat for better result. At the time of secondary surgery removal of the distractor was done followed by genioplasty.

S. No. 105
The Underspinal LeFort 1 Setback: A Modified Osteotomy for the Management of Maxillary Dentoalveolar Protrusive

Dr. Hitesh Kosanam

The Oxford Dental College

Abstract

The Lefort 1 osteotomy is one of the standard surgical procedures widely used to correct maxillary dentofacial deformities in three dimensions with low complication profile limited to deviated nasal septum and non-union osteotomy. The underspinal osteotomy is a modified low Lefort 1 setback osteotomy for the management of maxillary dentoalveolar protrusion which prevents loss of nasal bone support and preserves volume of nasal chamber by reducing the incidence of septal deviation which is a possible complication of the usual Lefort 1 osteotomy.

S. No. 106
Comparison of Soft Tissue Changes of Upper Lip After Lefort-1 Osteotomy Using Conventional Vestibular Incision and A Modified Incision

Dr. P. C. Bhoomika

Azeezia College of Dental Science and Research

Abstract

The correction of the dentofacial deformities with orthognathic surgery aims to provide a more functional maxilla-mandibular relationship and consequently improve the patient's harmony. The soft tissue profile strongly affects a patient's perception after orthognathic surgery. The surgical intervention can significantly alter the central aesthetic unit of the face, soft tissue profile. LeFort-1 osteotomy is one of the most commonly used procedure to correct midface deformities. Even though soft tissue falls along with the bone after bony correction, it can be modified with certain incisions which minimizes scarring and increases lip length. This presentation highlights on the soft tissue changes of the upper lip after LeFort-1 osteotomy using conventional vestibular incision and a modified incision.

S. No. 107
Evaluation of Masticatory Efficiency Before and After Mandibular Setback Osteotomy-Using a Bite Force Recorder

Dr. K. Anitha

Kmct Dental College, Manassery P O, Mukkam, Kozhikode, Kerala, Pin-673602

Abstract

Background and Objectives

The prime reason for patients to seek orthognathic surgery is the improvement of facial aesthetics. Masticatory efficiency is compromised most commonly in patients with prognathic mandible and may require more chewing cycles to triturate food than persons with normal occlusion. These patients tend to have poor masticatory function than normal individuals. This presentation is aimed at evaluating the masticatory efficiency in patients with mandibular prognathism and poor bite force, by measuring the bite force values before and after BSSO.

Methods

20 individuals within the age range of 18–45 were selected as per inclusion criteria. Masticatory efficiency was evaluated by measuring the bite force in each patient before BSSO and postoperatively.

Results

The bite force values obtained presurgical and post surgical were statistically analyzed using paired *t* test. Observations and analysis depicted a highly significant increase in bite force after surgical correction.

Interpretations and Conclusions

Biteforce in all patients before the setback surgery was significantly inferior to the normal human biteforce. The biteforce after 6 months of surgery was significantly higher than before it. However the biteforce is expected to increase in the long term because of the adaptation of the muscles and better occlusal contacts.

Reference

- Iwase M, Ohashi M, Tachibana H, Toyoshima T, Nagumo M. Bite force, occlusal contact area and masticatory efficiency before and after orthognathic surgical correction of mandibular prognathism. *International Journal of Oral and Maxillofacial Surgery*. 2006;35(12):1102–1107.

S. No. 108

Oral Appliances for Management of Obstructive Sleep Apnoea (OSA)

Dr. T. Sindhu Subbhulakshmi

Dayananda Sagar College of Dental Sciences

Abstract

Obstructive sleep apnoea (OSA) is a common sleep disorder characterized by recurring collapse of the upper airway during sleep resulting in sleep fragmentation and oxygen saturation. It is defined as the occurrence of a 5 or more episodes of complete (apnoea) or partial (hypopnea) upper airway obstruction per hour of sleep (Apnoea–Hypopnea Index AHI) and is estimated to occur in around 24% of middle-aged men and 9% of women. The gold standard treatment for OSA is to pneumatically splint open the upper airway during sleep using CPAP (Continuous Positive airway pressure). Although CPAP is highly efficacious in preventing upper airway collapse, patient acceptance, tolerance and adherence is often low, thereby reducing effectiveness. Oral appliances (OA) have emerged as an alternative to CPAP for management of OSA. OA are designed to improve upper airway configuration and prevent collapse through alteration of jaw and tongue position. The goal of therapy whether surgery, CPAP or Oral appliances is to significantly impact oxygenation and reduce AHI. Success rates of Oral appliances tend to be higher in the moderate index level when compared to severe level. Hence, use of oral appliances in the treatment of OSA should be considered as a first line in mild to moderate cases. The purpose of this poster is to provide information on various oral appliances used and their efficacy in management of OSA.

Keywords Obstructive sleep apnoea, OSA, Oral appliances, CPAP

S. No. 109

Autologous Fat Graft for Scar Revision

Dr. Prakriti Sasindran

A. J. Institute of Dental Sciences

Abstract

Aim

To explore the current evidence regarding autologous fat grafting in the treatment of hypertrophic and painful scars.

Materials and Methods

Studies that have used autologous fat graft to treat scars in human participants were included.

Conclusion

The description of its benefits in improving scar tissue is promising, indicating its ability to reduce functional limitations as well as enhancing cosmetic appearance. Analgesic effects are known to be

caused by nerve repair and scar entrapment release. The injection procedure in itself is responsible by making an adequate space under scar tissue and it is hypothesised that grafts containing TGF- β play an essential role in immunosuppression by acting on T-cells, which therefore results in an analgesic effect. However, there is a limited number of studies that have reported significant results and so also there is lack of high-quality randomised control trials. It is hence difficult to conclude that autologous fat graft significantly improves scar tissue. However, what can be taken up is the fact that autologous fat graft is a potential treatment method which could be explored in the near future. We can therefore conclude that AFG is a safe treatment method with few complications and it poses promising benefits in future treatment of scar-related conditions.

S. No. 110

Virtual Treatment Planning in Orthognathic Surgery

Dr. Deepthi V. Pai

AB Shetty Memorial Institute of Dental Sciences, Mangalore

Abstract

Introduction

The dental occlusion, facial skeleton, and soft tissues triad plays a critical role in planning of orthognathic surgery for individuals with dento-maxillofacial abnormalities. The emergence of 3-D imaging and computer-aided surgical simulation (CASS) has caused a paradigm shift in surgical planning and they are now routinely employed for craniofacial structure analysis and enhanced surgical success prediction in orthognathic surgery

Aim

The aim of this article is to present an integrated 3D virtual approach to computed tomography-based virtual treatment planning for cutting-edge orthognathic surgery, as well as to discuss the potential benefits and actual limitations of an integrated 3D virtual approach for the treatment of patients with maxillofacial deformities.

Materials and Methods

We have described the various stages of the workflow process for routine 3D virtual orthognathic surgery treatment planning: (1) image acquisition for 3D virtual orthognathic surgery; (2) processing of acquired image data to create a 3D virtual augmented model of the patient's head; (3) 3D virtual diagnosis of the patient; (4) 3D virtual orthognathic surgery treatment planning; (5) 3D virtual treatment planning communication; (6) 3D splint manufacturing; (7) 3D virtual treatment planning transfer to the operating room; and (8) 3D virtual treatment outcome evaluation.

Conclusion

The use of 3D treatment planning and virtual surgery represents a fundamental paradigm shift in oral and maxillofacial surgery, especially orthognathic surgery, and can deliver optimal functional and aesthetic results, patient satisfaction, and perfect translation of the treatment plan.

S. No. 111
Virtual Surgical Treatment Planning in OMFS

Dr. L. V. Shrishma

M. R. Ambedkar Dental College and Hospital

Abstract

Several advances in the management of maxillofacial surgeries have resulted in improved outcomes which has led to the development of improved classification schemes, biomaterials, fixation techniques and more accurate postoperative outcomes. Virtual surgical planning (VSP) is the use of CT images and biomedical engineering software to perform computer assisted surgical simulation. The application of this technology is vast. It includes maxillofacial trauma repair, in secondary reconstruction cases as it confirms proper reconstructions of defects through mirror imaged anatomy, as in unilateral orbital floor fracture. In addition, osteotomy cutting guides, plate positioning guides and custom implants can be designed and fabricated based on VSP technologies. The application of VSP cannot be unacknowledged, especially in the field of orthognathic surgeries, facial asymmetry and tumor resected segment reconstruction. The use of 3D models and software has contributed immensely in enhancing the efficiency of surgical outcomes. Despite many advantages, it cannot replace a surgeon's clinical judgement and skill as the success of any surgery hinges on the surgeons previous training and past experiences. The 3D models not only prove to be a valuable adjunct, but also decrease the mental fatigue of a surgeon.

S. No. 112
Use of CT Scan in Assessment of Condylar Position Post Orthognathic Surgery

Dr. Mansi Dugar

A.B. Shetty Memorial Institute of Dental Science

Abstract

Optimal condylar position has been a controversial issue and holds historical importance for prosthetic rehabilitation. The clinical significance of joint space is of great value and its configuration is influenced by glenoid fossa, condyle and condylar positions within the fossa in TMJ.

Aim

The study aimed to assess the changes in condylar position after orthognathic surgery using 3D CT scans.

Method

All the patients in study were assessed with CT images for condylar Antero-Posterior positional changes including analysis of condylar position and joint spatial measurements were done on sagittal slices obtained presurgery and postsurgery.

Results

Orthognathic surgery would alter the condylar position and it might affect skeletal relapse and occlusal stability after surgery. The results concluded that condyles had changed from anterior position in pre-surgery group to a concentric position followed by posterior position in postsurgery group.

Conclusion

3D CT has proven as a useful technique for studying TMJ changes with better image quality and multiple generated slices. A significant amount of changes of condylar position prevail after orthognathic surgery.

S. No. 113
The “Rubberband Effect”: Understanding the Pharyngeal Changes in Orthognathic Surgery

Dr. R. Sharanya Menon

AB Shetty Memorial Institute of Dental Sciences

Abstract

Introduction

Orthognathic surgery assisted by orthodontic procedures aid in the repositioning of the maxilla and the mandible thereby achieving desirable esthetic results. The repositioning of the upper and lower jaw not only brings about changes externally but also changes are seen in the pharyngeal space. The sagittal changes of the mandibular position influence the pharyngeal airway space (PAS).

Aim

This review aims to discuss the immediate and long-term changes in the anteroposterior dimension of the PAS following orthognathic surgery to the maxillomandibular complex.

Results

It has been found that the setback procedures of the mandible produce a variable decrease in the anteroposterior dimension of the PAS without obstructive sleep apnoea being reported in most mandibular setback patients. This can be explained by considering the PAS to be a rubber band that is oval in shape. A decrease in the anteroposterior dimension of the PAS gives rise to a noticeable increase in the lateral dimension of the PAS.

Conclusion

Despite findings, literature has failed to yield a unanimous answer for mandibular setback surgery and the PAS. Long-term follow-up studies are necessary to ascertain the changes in PAS volume.

References

1. Balakrishna R, Reddy M, Kashyap VM, John J. The “Rubber Band” and “Slingshot” Effects of the Posterior Airway Space in Mandibular Orthognathic Surgeries. *Journal of Maxillofacial and Oral Surgery*. 2014 Dec 1;13(4):514–8.

S. No. 114
Post-operative Skeletal Stability in ‘Surgery First Approach’ Versus ‘Conventional Orthognathic Surgery Approach’ for Dentofacial Deformities

Dr. Diksha Dinker

College of Dental Sciences, Davangere

Abstract

Introduction

Successful outcomes in modern orthognathic surgery rely on close collaboration between the surgeon and the orthodontist across all stages of treatment from preoperative planning to finalization of occlusion. Conventional orthognathic surgery requires preoperative orthodontic treatment, which increases the treatment period and postop orthodontic treatment for stabilization. In order to offset this disadvantage, brachvogel proposed a surgery-first approach to orthognathic surgery in 1991. This approach has the advantage of a significantly shortened treatment duration. As surgery first approach is a comparatively newer and faster approach which brings the changes earlier than the conventional approach, the good old widely

acknowledged dogma of orthognathic surgeries although it still remains controversial in terms of its long term post operative results.

Aim

Thus, this study is being conducted to evaluate the skeletal stability post operatively using lateral cephalometric analysis, in patients who were treated with orthodontic treatment prior to the surgery like in conventional orthognathic surgery versus it's comparison with the patients who were treated with surgery-first orthognathic approach without any pre surgical orthodontics.

Materials and Method

This radiographical and comparative study was conducted on 20 patients requiring orthognathic surgery for various skeletal discrepancies.

Patients were divided into two groups:

- Group A (SFA Group)—10 Patients
- Group B (OFA Group)—10 Patients
- To evaluate the post operative skeletal changes and their retention over a course of 6 months in 'Surgery First Approach (SFA)' and 'Conventional Orthodontics First Approach (OFA)' using a total of 8 linear and 3 angular measurements in terms of horizontal and vertical planes which will signify the post operative stability of these landmarks.

Results

Awaited.

S. No. 115

The Efficacy of PRF Membrane in Orthognathic Surgery: A Comparative Evaluation on Anterior Maxillary Osteotomy

Dr. P. Augusta Giftslin Ramya

Rajas Dental College

Abstract

Introduction

Platelets contain high quantities of growth factors, such as PDGF-AB (platelet-derived growth factor AB), TGFβ-1 (transforming growth factor β-1) and VEGF (vascular endothelial growth factor), which has the ability to stimulate cell proliferation, matrix remodeling and angiogenesis. Choukroun introduced platelet rich fibrin (PRF), which is an autologous blood product that contains a high concentration of platelets. Orthognathic surgery is the major surgical procedure which is used in the correction of maxillo-mandibular discrepancies, there by helps in improving the facial aesthetics. This study emphasizes on the efficacy of PRF in orthognathic surgery particularly in anterior maxillary osteotomy

Aims and Objectives

- To evaluate the efficacy of Platelet Rich Fibrin in bone regeneration and maturation in the osteotomy site of anterior maxillary osteotomy.
- To measure the mean Hounsfield unit of the region of PRF application and compare the control region to measure the bone density using CBCT.

Materials and Methods

Study design: Prospective, comparative split mouth study. Sample size: N = 10 (Sample N = 5, Control N = 5). Materials used: 20 ml of patient's venous blood taken and centrifuged at 3500 rpm to get PRF, after the skeletal fixation, PRF is placed and suturing was done.

Results

On evaluation of CBCT taken after 6 months the mean bone density of the sample region with PRF application is higher than the control

region without the PRF application. the results are statistically significant.

Discussion

PRF contains the essential growth factors which plays an important role in the formation of bone. This study evaluates the use of PRF which enhances the bone formation and bone density

S. No. 116

Differential Impaction of Maxilla

Dr. A Ramisz Rahman

Thai Moogambigai Dental College and Hospital

Abstract

Introduction

Orthognathic surgery of the maxilla and mandible involves complex geometrical movements of the maxillo-mandibular complex. An appropriate treatment plan has to be formulated using the diagnostic information obtained from clinical examination, radiographic assessment and study models. Out of various treatment modalities alteration of occlusal plane is more challenging, this can be done in either conventional or differential impaction method. Differential impaction method gives good aesthetic results and this was achieved by the rotation of maxillo-mandibular complex.

Aim

To evaluate the outcome of differential impaction in various skeletal discrepancy.

Materials and Methods

Orthodontic evaluation of skeletal malocclusion patients was done with Burstone analysis in the cephalogram. The geometry of maxillo-mandibular complex rotation and the expected effects are best demonstrated by constructing a triangle involving the posterior nasal spine (PNS), anterior nasal spine (ANS), and pogonion (Pog). Pre and post cephalometric analysis was done.

Results

The results of the surgical outcome was satisfactory to the patient and auto rotation was well accommodated and occlusion was stable in our observation for 3 years.

Discussion

Differential impaction of maxilla taking reference point at ANS. PNS or zygomatic buttress for alteration of occlusal plane will give stable result when compare to conventional method.

Conclusion

Surgical reposition of MMC using this alternative treatment design provides more efficient aesthetic results.

References

1. Reyneke JP. Rotation of the maxillomandibular complex. Orthognathic Surgery: Principles, Planning and Practice. 2016 Dec 16:530–54.
2. Reyneke JP. Surgical cephalometric prediction tracing for the alteration of the occlusal plane by means of rotation of the maxillomandibular complex. The International journal of adult orthodontics and orthognathic surgery. 1999 Jan 1;14(1):55–64.

S. No. 117**The Effect of BSSO on Condylar Axis, Position in Skeletal Class III Patients: A 3D Analysis***Dr. Lokesh J. R.**Government Dental College and Hospital, Kottayam***Abstract****Background and Objective**

Bilateral sagittal split osteotomy (BSSO) introduced by Obwegeser and modified by Dalpont, Hunschek and Epcker is the most common surgical procedure performed to treat class III skeletal relationship. BSSO can result in change of the condylar axis and orientation resulting in physical stress and remodeling of the condylar head. It is important to maintain the condylar orientation during BSSO to prevent early relapse and Temporomandibular dysfunction. This study is aimed at analyzing the effect of BSSO on the 3D condylar orientation in patients with class III skeletal deformity.

Materials and Method

This is a descriptive study with a study sample of 20 patients who underwent BSSO for correction of Skeletal class III deformity in Department of Oral and Maxillofacial surgery, GDC Kottayam. Pre op and Post op CBCT was taken to assess the changes in the condylar axis, intercondylar distance, inter condylar angle and Anteroposterior condylar positional change.

Results

There was significant decrease in mean condylar axis angle, intercondylar angulation, posterior movement of condyle into a concentric position following BSSO. No significant change in intercondylar distance.

Conclusion

The condylar orientation during BSSO is affected by multiple factors like patient position during surgery and muscle relaxation. The condylar position can be easily altered by minor manipulation under general Anaesthesia. Ramal guides, Biocritical fixation, Condylar positioning device can aid in maintaining condylar orientation and achieving better post-operative results.

S. No. 118**Simultaneous TMJ Ankylosis Release with Uniplanar Mandibular Distraction Osteogenesis***Dr. Pratesh Nitin Dholabhai**Government Dental College and Hospital Ahmedabad***Abstract****Introduction**

In TMJ ankylosis (TMJA), micrognathia may create narrowing of the pharyngeal airway space (PAS) with, causing obstructive sleep apnea (OSA). Generally, at least two surgeries are required for TMJA patients—one for release and another for correction of facial asymmetry.

Aim

To evaluate the efficacy of simultaneous mandibular TMJ Ankylosis release with uniplanar mandibular distraction osteogenesis.

Material and Methods

For this study, 10 patients of unilateral or bilateral TMJA with mild to moderate Apnea Hypopnea index and short body length but normal ramus length were operated in the Department of Oral and

Maxillofacial Surgery, Government Dental College and Hospital, Ahmedabad. Patients with short ramal height, therefore requiring biplanar distraction and severe OSA or AHI > 30 were excluded. Clinical parameters (mouth opening, patient satisfaction index, complications), radiological parameters (mandibular body length, SNB angle, mandibular plane angle, N perpendicular to Pog), and OSA parameters (AHI, posterior airway space, SpO₂, Oxygen desaturation index) were evaluated.

Results

Average mandibular body length increased by 16.6 mm, mouth opening by 27.2 mm, AHI by 15.74, SNB angle by 9.53°, N perpendicular to pog by 12.26 mm. Transient facial nerve palsy was seen in two patients, damage to tooth and device failure in one patient.

Conclusion

Simultaneous TMJ Ankylosis release with uniplanar mandibular Distraction osteogenesis is recommended as the treatment of choice to correct TMJ ankylosis associated with mild to moderate OSA as causes simultaneous correction of micrognathia, facial asymmetry, OSA and prevents the need for an additional surgery.

Category: Temporomandibular Joint**S. No. 119****A Retrospective Study on Factors Affecting the Dropout Rate Among Temporomandibular Joint Disorders in India: A Single Institution Experience***Dr. Shallu Bansal**Surendra Dental College and Research Institute, Rajasthan***Abstract****Introduction**

Patients suffering temporomandibular joint internal disc derangement ignore appointments after the first examination or after first or second sessions of initial treatment. Dropout rate for these patients varies from 36 to 78% as per literature. Unfortunately very few studies have investigated the dropout rate of these patients. So the present study was undertaken to find out the dropout rate among these kinds of patients.

Methods

A retrospective study was done from June 2008 to December 2017 by collecting the records of the patients who were diagnosed to have IDD. Outcome variables included were age, sex, distance travelled, occupation and education.

Results

Out of 1021 patients 766 patients were included in the study after fulfilling the inclusion and exclusion criteria. The Data was analysed using Chi square test. The level of significance was set at < 0.05. In our study there is slight male predominance (52.8%) and 63.1% (21–40 years) were among young adults and the patients in the age group of 21–30 years had shown good compliance, Post graduate has shown the highest follow-up rate when compared with graduates and school level and difference was found to be statistically significant. People in job had shown the good compliance when compared with business class and retired people and the patients within 50 km had shown the maximum follow-up with a statistically significant difference ($p < 0.01$)

Conclusion

This study has shown that dropout rate of treatment in temporomandibular joint disorder is affected by age, sex, distance travelled, occupation and education.

S. No. 120**Dautery's Procedure: A derelict Procedure, But an Effective Solution for Chronic Recurrent TMJ Dislocation***Dr. Sunil Vasudev**D A P M R V Dental College and Hospital***Abstract****Background**

Dislocation of the Temporomandibular Joint represents 3% of all reported dislocated joints in the body. Chronic recurrent dislocation is caused by dysfunction of the components of the TMJ, including abnormal articular eminence, glenoid fossa, or condylar head; relaxation of the ligaments and the capsule; or dysfunction of the muscles of mastication. CRD is characterized by a condyle that slides over the articular eminence, catches briefly beyond the eminence and then returns to the fossa.

Introduction

The brief review of literature shows varied techniques employed over the years to treat this condition. Conservative modalities like bandages, splints; injections of extra articular sclerosing agent injections, autologous blood, botulinum toxins have also been used. But these have limitations in the form of recurrence, morbidity, functional impairment and lack of satisfactory results. Surgical treatments are usually the last resort for CRD. Dautery's procedure has emerged as a popular choice among surgeons as it is designed to avoid interference with normal movements, but to prevent abnormal forward excursive movements. This is case of a 29 year old female patient with a chief complaint of Recurrent dislocation of the Right TMJ since past 10 years. She was surgically treated using the Dautery's Procedure. We have achieved good results through a meticulous follow-up.

Reference

1. Jeyaraj, P., 2017. Chronic Recurrent Temporomandibular Joint Dislocation: A Comparison of Various Surgical Treatment Options, and Demonstration of the Versatility and Efficacy of the Dautrey's Procedure. *Journal of Maxillofacial and Oral Surgery*, 17(1), pp. 95–106.

S. No. 121**Combined Bilateral Temporomandibular Joint Replacement with Orthognathic Surgery: Our Review of 3 Cases***Dr. Arun Sharma**BLK Super Speciality Hospital***Abstract**

The paper intends to highlight our experience with single stage bilateral total joint replacement (TJR) with orthognathic surgery in bilateral temporomandibular joint (TMJ) ankylosis patients. All the 3 cases were previously operated cases of bilateral TMJ ankylosis release. The single stage procedure comprised of bilateral TJR along with Lefort I osteotomy and augmentation genioplasty for correction

of their facial deformities and obstructive sleep apnea. Planning involved cephalometric analysis, virtual surgery planning and fabrication of 3d model which was done for all patients. All 3 patients showed good results with stable interincisal opening and a drastic improvement in profile. The orthognathic surgery result was stable. Maximum follow up is 3 years with negligible relapse. Post-operative complications were salivary fistula, unilateral TMJ dislocation, facial nerve paresis, unilateral degloving of lower vestibule from gingival margins, all of which occurred in a single patient and were managed successfully. To conclude, single stage bilateral TMJ replacement with orthognathic surgery is a feasible but extensive procedure. The computer simulation surgery and virtual planning is an extremely important tool to visualise the deformity, osteotomy cuts and the end result. The vertical correction of ramus is extremely stable because of the rigid prosthesis and hence should be the preferred method of correction for orthognathic correction in these patients.

S. No. 122**Single Stage Temporomandibular Joint Replacement with Concomitant Orthognathic Surgery for TMJ Ankylosis: The AIIMS Raipur Experience***Dr. Santhosh Rao**All India Institute of Medical Sciences (AIIMS), Raipur***Abstract****Purpose of the Study**

To evaluate functional and aesthetic outcomes in a patient with temporomandibular joint ankylosis treated with concomitant temporomandibular joint—total joint reconstruction (TMJ-TJR) and orthognathic surgery (CTOS) using Computer assisted surgical simulation (CASS).

Materials and Methods

Patients who were diagnosed with Temporomandibular ankylosis or with re-ankylosis of Temporomandibular joint after a failed surgery between the ages of 18–45 years were recruited for study purpose. Patients with ankylosis release done using interpositional gap arthroplasty but with persistent deformity requiring joint reconstruction and simultaneous fulfilment of their aesthetic demands were ideal candidates. Preoperatively patients aesthetic and functional assessment were done by parameters using mouth opening, the maxillomandibular relations, amount of mandibular deficiency leading to class II convex profile and cephalometric parameters were all taken into considerations for presurgical planning. Patient specific implants were designed to reproduce the functional joint movements and to re-establish a Class III lever function as in normal joint. Concomitantly, orthognathic surgery was done to establish functional occlusion without presurgical orthodontics at disposal making it challenging task to fulfil. Postoperatively patient were checked for mouth opening, signs of early joint dislocation, aesthetic satisfaction, active jaw movements.

Results

Patients so far recruited in the study for concomitant orthognathic and TJR were found to be successfully rehabilitated making PSI an effective option to precisely correct dentofacial abnormality.

S. No. 123**Distraction Osteogenesis in TMJ Ankylosis Patients***Dr. Ashish Pandey**Babu Banarasi Das College of Dental Sciences, Bbd University, Lucknow***Abstract****Background**

Temporomandibular joint ankylosis is the fusion of the condyle to glenoid fossa resulting in limited movement of the mandible leading to severe debilitation. It is most commonly associated with trauma, local or systemic infection or systemic disease. Restoring normal function, anatomy and facial features is challenging in such cases. Distraction osteogenesis is a surgical technique in which new bone formation is induced by gradual separation of bony segments by means of an appliance in conjunction with an osteotomy. This paper is aimed at evaluation and assessment of the functional and esthetic outcome in correction of facial asymmetry in temporomandibular ankylosis by distraction osteogenesis.

Objectives

Distraction osteogenesis is an alternative treatment method for the correction of facial asymmetry in TMJ ankylosis patient. In this case report, distraction with an intraoral device was performed to gradually lengthen the corpus and ramus of a patient who had a TMJ ankylosis.

Methods

The patient underwent unilateral intraoral distraction osteogenesis. After 7 days of latency period, distraction was performed 0.5 mm twice a day. Subsequent consolidation period was 12 weeks.

Results

The patient's mandible was elongated successfully. Mouth opening also increased due to advancement of the mandible.

Conclusion

Satisfactory results from both aesthetic and functional standpoints were obtained by distraction osteogenesis of the mandible.

S. No. 124**Middle Temporal Vein as an Anatomical Guide to Prevent Iatrogenic Injury to Temporal Branches of the Facial Nerve During TMJ Surgeries. An Evidence Based Cadaveric-Clinical Study***Dr. Puneet Wadhvani**Career Post Graduate Institute of Dental Sciences***Abstract****Introduction**

Incidence of facial nerve injury following TMJ surgery ranges from 1 to 32%. The present study aims to use the middle temporal vein (MTV) as an anatomic landmark during TMJ surgery to prevent damage of temporal branches of the facial nerve. According to the study, MTV runs approximately along the line between 52 mm lateral from the bony lateral canthus and 12 mm medial from the external auditory canal. The mean distance between the MTV and temporal branch of facial nerve is 13 mm.

Aim

We propose the use of MTV as an anatomic landmark during TMJ surgery to prevent damage of temporal branches of the facial nerve.

Objective

To establish correlation between middle temporal vein and temporal branches of facial nerve and define a safe zone of dissection.

Material and Method

The study was conducted in 2 phases:

Phase I: Cadaveric Study.

Phase 2: Clinical Study.

Cadaveric Study: 20 TMJ regions were dissected to study the correlation between MTV (its existence, distribution pattern) and temporal branches of the facial nerve.

Clinical study: Clinical study was performed on 10 TMJ surgery patients after fulfilling the inclusion–exclusion criteria, in which MTV was identified and used as a landmark to limit the extent of surgery.

Results

Statistical analysis done, no patient suffered any facial nerve injury.

Conclusion

Middle temporal vein is an effectual, consistent anatomical landmark that can be used to limit surgical dissection and prevent injury to the temporal branches of the facial nerve.

References

1. Anatomy of the middle temporal Vein: Implications for Skull-Base and Craniofacial Reconstruction using Free Flaps. Tomoyuki Yano et al, *Plast Reconstr Surg*, 2014 July, 134(1):92e–101e
2. The frontal branch of the facial nerve across the zygomatic arch, Andrew P Trussler et al, *Plast Reconstr Surg* 2010 Apr; 125(4): 1221–1229

S. No. 125**3D Assessment in TMJ Ankylosis***Dr. Sharma Shivani Yogesh**King George's Medical University, Lucknow***Abstract**

Pediatric maxillofacial fractures are less common than in adults. Mandibular fractures in children are less due to the protective anatomy in them. Management of the pediatric fracture depends on the type and severity of the fracture displacement. It can vary from conservative management with acrylic splint and arch bar fixation to surgical exposure of the fracture site with internal fixation. Special consideration is needed in children for the interferences of the growth and developing tooth buds while going for surgical management. The hardware for internal fixation can be made up of either titanium or bioresorbable material. This poster presents a case where a pediatric patient with extensive mandibular fractures and facial lacerations was managed with emergency tracheostomy and open reduction and internal fixation with titanium miniplates of the compound mandibular fracture owing to the emergent situation and inability of the patient's family to afford the cost of the bioresorbable plates.

S. No. 126**Reconstruction Options of Temporomandibular Joint Ankylosis***Dr. Satyanarayan Pandey**Armed Forces Medical College, Pune***Abstract**

The aim of this paper is to compare the outcome of reconstruction options for management of temporomandibular joint (TMJ) ankylosis

depending upon the age of patients. This prospective study conducted at a tertiary care hospital in the state of Maharashtra consisted of patients diagnosed clinically and radiologically as cases of TMJ ankylosis. Depending upon the reconstruction options provided, cases were divided into three groups. All cases underwent osteoarthrectomy followed by interposition of temporalis myofascial flap. According to the reconstruction carried out after osteoarthrectomy cases were divided into three groups. Group I included cases of reconstruction with costochondral graft (CCG). Group II included cases treated by osteoarthrectomy and reconstruction of ramal condylar unit (RCU) using distraction osteogenesis (DO). Group III cases were treated by osteoarthrectomy and reconstruction of (RCU) using total alloplastic joint replacement. The outcome variables were maximum interincisal opening, range of jaw motion, malocclusion, posterior ramal height and facial symmetry. Postoperative monitoring was carried out for a minimum period of 18 months. Comparative variables namely maximum interincisal opening, range of jaw motion, malocclusion, posterior ramal height and facial symmetry were noted and success of each modality evaluated. On statistical comparison of the three groups, restoration of lower facial height, maximum interincisal opening and correction of facial asymmetry was comparable upto the follow up period of 18 months. Reconstruction options can be tailor made after osteoarthrectomy of the ankylosed temporomandibular joint as per the age and prevailing anatomical consideration.

S. No. 127

A Comparative Study Between Arthrocentesis and Arthrocentesis with Dextrose Prolotherapy in TMJ Internal Derangement

Dr. Nair Remya Madhusuthan

Sri Hasanamba Dental College and Hospital

Abstract

The aim of the study was to evaluate treatment procedures for patients suffering with chronic TMJ pain, clicking and restricted mouth opening by performing Arthrocentesis in three different sessions and comparing result with another group of patients receiving Arthrocentesis followed by dextrose prolotherapy in single session. A randomised clinical trial conducted on patient with TMJ pain reduced mouth opening and clicking joint based on clinical signs and symptoms and radiographic assessment. Twenty patients were diagnosed and randomly assigned for Arthrocentesis in three sessions (Group A) and single session Arthrocentesis with 25% dextrose prolotherapy (Group B). Clinical evaluation performed at baseline, 2 week, 1-month and 3 months. Fishers exact test, unpaired *t*-test and chi-square test were used for analysis. Patients with rheumatoid arthritis, para-functional habits, post trauma surgery were excluded. Twenty participants received two different treatments: 3 sessions of Arthrocentesis and 1 session of combined Arthrocentesis and Prolotherapy under local anesthesia. There was no statistical difference in pain, clicking, mouth opening and molar bite force in both the groups. Both the procedures reduced the sign and symptoms of TMD's and can be used as an adjuvant in the treatment of TMJ internal derangement. It was concluded from the study that both treatment modalities are highly effective on patients who suffer from TMJ internal derangement. The combination of arthrocentesis and prolotherapy is preferred over multiple sessions of arthrocentesis due to reduced clinical time and single puncture into superior joint space which decreases patient's discomfort.

S. No. 128

Mandibular Distraction Osteogenesis Proceeding Interposition Arthroplasty: Management of TMJ Ankylosis

Dr. Priyanka Sinha

Abstract

Temporomandibular joint ankylosis leads to significant amount of facial deformity. Correction of facial deformity by distraction osteogenesis has become mainstay for treatment of craniofacial syndrome with mandibular hypoplasia including TMJ ankylosis. There is increased risk of reankylosis when facial deformity due to TMJ ankylosis is attempted to be corrected by distraction after release of ankylotic mass. To overcome this an attempt was made to correct facial deformity prior to release of ankylosis. The objective of the study was to evaluate the benefit of distraction osteogenesis prior to release of the TMJ ankylosis. 50 patients of TMJ ankylosis were treated using protocol i.e., distraction followed by ankylosis release. Patient included in this study were aged between 5 and 50 years. Both intraoral/extraoral distractors were used depending on requirements and socioeconomic status. The minimum follow-up period was 6 months. The combination of correction of facial deformity as primary procedure and ankylosis release as secondary procedure provide good functional and aesthetic results in patient with facial deformity with TMJ ankylosis.

S. No. 129

Modified Single Barrel Double Lumen Technique Using Injection Placentrix in TMJ Arthrocentesis

Dr. Nukala Bhargav Ram Kumar

Mamata Dental College

Abstract

TMJ Arthrocentesis is a diagnostic and therapeutic modality in treating TMJ disorders. The aim of the study was to diagnose and treat osteoarthritis, degenerative changes and internal derangement of TMJ. To assess the effectiveness of Placentrix as medium for lavage of the joint. Five patients with degenerative changes and/or internal derangement are randomly included in this study. Single-puncture arthrocentesis with modified double-lumen single-barrel needle along with use of injection placentrix was used. Procedure was done in 2 steps where lavage was done initially using NS and then using Inj. Placentrix. The results were favourable with Injection of Placentrix after TMJ joint lavage with saline. The intensity of reduction in pain was better appreciated after Placentrix injection, than with normal saline. Statistical analysis of the results is awaited. In TMJ Arthrocentesis various agents have been used such as NS, RL, hyaluronic acid, autologous blood, corticosteroids etc. In our study we found the usage of Injecting Placentrix soln. after thorough Arthrocentesis with normal saline, to be effective with satisfactory improvement in reduction of intensity of pain and clicking sounds and crepitus over a period of time. Our study has found that Inherent properties of placentrix soln. Such as immunotropism, wound healing, anti-inflammatory nature, play a key role in reducing TM joint inflammation and degenerative changes leading to internal derangement.

S. No. 130
Single Puncture Arthrocentesis: A Technical Modification

Dr. Aarathy P. T.

PMS College of Dental Science and Research

Abstract

Arthrocentesis of the temporomandibular joint was introduced in 1991 by Nitzan et al. and has since been popular among practitioners who treat temporomandibular joint disorders. It is used as the first-line surgical treatment for patients who do not respond to conservative treatment (physical therapy, occlusal splint therapy, pain medication, and lifestyle and behavioural changes). An in vivo prospective interventional study was conducted in 20 subjects. The study involved both males and females of age ranging from 20 to 60 years who were diagnosed with temporomandibular joint disorder in which conservative treatment has not given any significant improvement. All the subjects underwent single puncture arthrocentesis using our fabricated device. We followed Rahal's technique of arthrocentesis with some significant modification in our device. The modifications made our device less traumatic and more comfortable in precisely positioning the device. The major two modifications done by us are in contrary to the standard device mentioned in the literature. The primary modification was that the combined diameter of the port of entry smaller than that of the dual needle device used by Rahal et al. The second modification was the change in angulation of the two needles.

S. No. 131
MRI Evaluation of Temporomandibular Joint Internal Derangement Before and After Arthrocentesis

Dr. R. Parvathy

KMCT Dental College

Abstract

Temporomandibular joint (TMJ), a joint in human body which is subjected to many disorders commonly addressed as temporomandibular joint disorders (TMD). Internal derangement is the most common disorder in which there is an abnormal relationship of articular disc to the mandibular condyle, fossae and articular eminence. Arthrocentesis is considered as a minimally invasive procedure in patients who are refractory to conservative management. The aim of the study is to evaluate the efficacy of arthrocentesis to treat TMJ internal derangement and to correlate clinical findings with magnetic resonance imaging (MRI) findings in TMJ internal derangement and to compare pre and post arthrocentesis MRI findings. 30 patients refractory to conservative management for atleast 1 month was selected for this study. MRI evaluation of disc position, disc mobility and joint effusion was evaluated pre-operatively and 6 months post-operatively. Clinical parameters like mouth opening, joint clicking and pain relief were evaluated pre-operatively and at an interval of 2 weeks, 1 month, 4 months and 6 months postoperatively. During post operative 6 months follow up, patient showed significant improvement in pain and mouth opening and a decrease in clicking sound. In MRI, significant improvement in disc position was noted post-operatively while disc mobility and joint effusion showed no improvement. Study revealed that arthrocentesis provided a significant improvement in symptoms of TMD. Arthrocentesis can be

considered as a minimally invasive therapy that bridges conservative and surgical methods.

S. No. 132
Incidence, Clinical Presentation and Associations with Psychological Distress for TMJ Disorders in Non-patient Population

Dr. Mridul Arya

Sudha Rustagi College of Dental Sciences and Research

Abstract

Temporomandibular disorders are a combination of musculoskeletal and neuromuscular problems involving pain, dysfunction, and degeneration of the temporomandibular joints, masticatory muscles, and contiguous structures. About 60–70% of the general population has at least one sign of temporomandibular joint dysfunction, but only one out of four individuals is aware of these symptoms and reports them to a specialist. Understanding the etiology of temporomandibular joint disorders is extremely important in identifying and avoiding potential pathologic factors. Investigations have described high levels of psychosocial impairment and a high prevalence of psychological disorders in a TMD patient population. Their presence is said to be related with chronic pain and has important implications at the therapeutic level. Therefore, an assessment of psychosocial factors is a fundamental step during the diagnostic process of TMD patients. A study conducted at department of Oral and Maxillofacial Surgery, Sudha rustagi dental college describes the incidence and clinical presentation of temporo-mandibular joint disorders and their association with psychological distress and para-functional habits in a non-patient population.

S. No. 133
Temporomandibular Joint Dislocation

Dr. Tarun Jeswani

Maharana Pratap College of Dentistry and Research Centre

Abstract

Temporomandibular joint (TMJ) dislocation is an uncommon but debilitating condition of the facial skeleton. In case of mandibular dislocation, the normal anatomic relationship of the mandibular condyle and the glenoid fossa disrupts and condyle seats in an unfavourable position which is mostly anterior. The condition may be acute or chronic. Acute TMJ dislocation is common in clinical practice and can be managed easily with manual reduction but chronic dislocations are painful and distressing to the patient. The review of different treatment modalities in managing TMJ dislocation are being discussed in this paper.

S. No. 134
TMJ Total Joint Alloplastic Reconstruction and Its Outcomes in Three Cases

Dr. Arunima Raut

Rural Dental College

Abstract

Temporomandibular joint with its complex anatomy is vulnerable to several pathologies most of which are treated conservatively. But conditions which severely affect the function and anatomy of joint require total joint reconstruction. There are various options for reconstruction, autologous grafts include costochondral graft, sternoclavicular grafts, etc. Recently, alloplastic prosthesis is the choice of treatment due to its advantages over autologous grafts including early mobilization, improved movements and better long-term outcomes. The aim of the study was to evaluate the outcomes of alloplastic prefabricated TMJ prosthesis. TMJ reconstruction was done with prefabricated alloplastic prosthesis in three cases. 1. TMJ osteoarthritis, 2. Plexiform ameloblastoma of mandible and 3. Unilateral TMJ ankylosis. In all the three cases, condylectomy was performed and prefabricated TMJ alloplastic prosthesis was fixed. In second case of ameloblastoma of mandible. Reconstruction of mandible was done with free fibula bone graft along with TMJ stock prosthesis. In third case, TMJ reconstruction with concomitant orthognathic surgery was performed. Alloplastic TMJ prosthesis have underwent several modifications over the past few years. They are easy to install and do not require a second surgical site. The fossa and ramus components can easily be fixed with a combination of preauricular and retromandibular approach. They also have better functional recovery. With a six month follow up, all three cases reported with better functional adaptation and improved quality of life. With understanding the limitations of TMJ prosthesis, alloplastic stock prosthesis provides excellent outcomes in TMJ reconstruction.

S. No. 135
Temporomandibular Joint Ankylosis: An Experience at Our Centre During Covid Pandemic

Dr. Divya Sharma

Lady Hardinge Medical College

Abstract

Temporomandibular joint (TMJ) ankylosis is an extremely disabling affliction that causes problems in mastication, digestion, speech, appearance and obstructive sleep apnea. Surgery of TMJ ankylosis needs careful evaluation and planning to yield predictable results especially during COVID pandemic times taking stringent actions and following COVID-19 protocols. 8 cases of TMJ ankylosis were treated from Sept. 2019 to Aug. 2021. Patients were in the age range of 6–25 years, with 5 males and 3 females, including 6 unilateral cases and 2 bilateral cases. The duration of ankylosis ranged from 8 months to 5 years. The results in all the cases were satisfactory with adequate maximal interincisal mouth opening. They are under regular follow up and no untoward incidence was recorded.

S. No. 136
Superficial Versus Subfascial Versus Deep Subfascial Approach to Temporomandibular Joint: A Prospective Comparative Study

Dr. S. Hemavathy

Maulana Azad Institute of Dental Sciences

Abstract

The aim of the study was to compare the efficacy of superficial, subfascial and deep subfascial approaches in patients with Temporomandibular joint (TMJ) disorders and to correlate its effect on operating time, quality of surgical field, amount of blood loss, post-operative pain and swelling and specific branch of facial nerve injury. The study comprised of 30 cases indicated for TMJ surgery which were divided randomly into three study groups: Group I, Group II and Group III based on the surgical approach used. Group I patients included superficial approach where dissection was limited to superficial layer of temporal fascia, Group II included subfascial approach where dissection was carried between the two layers of the fascia and Group III included deep subfascial approach where dissection was kept between the deep layer of fascia and muscle. Intraoperatively, quality of surgical field, dissection time and intra-operative blood loss was calculated for each group. All patients were evaluated for pain and swelling at 1st, 3rd and 7th post-operative day. The facial nerve function test was performed post-surgically after 24 h, 1 week, 1, 3 and 6-month using House–Brackman scale. The deep subfascial approach to TMJ provided the safest approach among the preauricular approaches to avoid injury of facial nerve and yielded better post-operative result with respect to pain and swelling. However, the traditional subfascial technique provided a quicker and blood-less field of dissection.

S. No. 137
Treatment of TMJ Ankylosis with Costochondral Graft

Dr. Amruta Sardeshmukh

Bharati Vidyapeeth Dental College and Hospital

Abstract

Temporomandibular joint (TMJ) ankylosis is a rare disorder due to the fusion of mandibular condyle at the cranial base. Causes includes trauma, systemic diseases, or infections. Clinically, patients present with limited mouth opening. Also, disturbances of facial and mandibular growth, and acute compromise of the airway results in physical and psychological disability. Various techniques include adequate excision of the ankylotic block (arthroplasty), without interposing material (gap arthroplasty) or interpositional arthroplasty using autogenous/alloplastic materials. The aim of the study was to note the potential of CCGs as an interpositional material and to see whether they induce normal growth potential in the reconstructed mandible. In this case report, a 4 years old boy reported to the hospital with chief complaint of limited mouth opening since 7–8 months. Resection of ankylostic mass and interpositional arthroplasty with CCG graft was done under GA. The maximal incisal opening in the pre-operative period ranged from 7 to 8 mm and in immediate post-operative period from 15 to 20 mm. At the end of the follow up period, mean maximal incisal opening was 20 mm. In case of growing child the interpositional material fill the gap but should also reduce the facial deformity and induce normal growth potential

of the mandible. CCG restores the altered biomechanics after condylectomy or gap-arthroplasty procedures. Use of the autogenous costochondral interpositional graft is an effective procedure for the prevention of reankylosis following the surgical release of TMJ ankylosis.

S. No. 138
Post Traumatic Ankylosis of the Left TMJ: A Case Report

Dr. Divya Agrawal

A. J. Institute of Dental Sciences

Abstract

Ankylosis of the temporomandibular joint is a disabling condition that leads to functional impairment. Trauma is one of the most important etiologic factors causing it by means of haemarthrosis. It can be broadly classified into bony and fibrous ankylosis, the following case report describes about Post traumatic fibrous ankylosis of the left TMJ. A 42-year-old female patient presented with complaints of reduced mouth opening and inability to open the right eye since 2 months, secondary to a past history of trauma. On clinical examination a mouth opening of 13 mm was recorded along with ptosis of the right eye. Upon radiological examination a diagnosis of left fibrous ankylosis of the TMJ secondary to a condylar fracture followed by right orbital floor fracture was reached. Under aseptic conditions, left high condylectomy followed by interpositional arthroplasty with temporalis fascia was carried out. In addition, orbital defect was reconstructed using a Prolene mesh. Patient was then discharged in an uneventful condition on a regular follow up basis. TMJ ankylosis is a distressing structural condition that commonly occurs secondary to trauma which if left untreated can lead to severe functional and aesthetic disfigurement. Appropriate treatment in the form of Interpositional arthroplasty followed by aggressive oral physiotherapy and regular follow up helps in overall prognosis of the condition.

S. No. 139
The “XX” Factor in Temporomandibular Dislocation

Dr. Sanchit Mahajan

Manipal College of Dental Sciences

Abstract

The prevalence of temporomandibular disorders being higher among women than men suggest a possible link between its pathogenesis and the female hormonal axis. The direct influence of sex hormones on changes in collagen and elastin synthesis is well established, and there is a great deal of evidence that sex steroids have a direct metabolic effect on cartilage cells. Situations in which the levels of these hormones may go haywire, such as pregnancy, polycystic ovarian syndrome or menopause may have a direct effect in contribution to increased incidence of TMD in the female gender. PCOS is the most common endocrine disorder in women, which is characterised by chronic low-grade inflammation and excess of androgenic hormones that lead to metabolic aberrations and ovarian dysfunction. Increased activities of various matrix metalloproteinases in the serum of these patients have been reported, and it has been hypothesised that high activities of MMP may contribute to loss of matrix and chronic inflammation of the fibrocartilage in temporomandibular disorders.

On the other hand, in pregnancy another possible hormonal factor may be relaxin, a female polypeptide hormone produced by the corpus luteum. It is present in the blood in the last days of the menstrual cycle prior to the onset of menstruation and throughout pregnancy which has shown to cause increased joint laxity in pregnant women. Through this case series we would like to highlight cases in which women undergoing hormonal aberrance had recurrent TMJ dislocations and the modalities we used to manage them.

S. No. 140
Correlation of Clinical, Radiographic and Arthroscopic Findings in Internal Derangement of Temporomandibular Joint

Dr. Sonia Singhvi

Al Badar Rural Dental College and Hospital

Abstract

Internal derangement of the TMJ involves malposition of the disc in relation to the condyle and articular eminence resulting in clicking sounds. Arthroscopy is a diagnostic option which has high sensitivity and specificity that allows the evaluation of intra-articular pathologies as well as determination of the location and type of adhesions in the upper compartment of TMJ. The study was intended to study and correlate Clinical symptoms, Radiographic and Arthroscopic findings in the internal derangement of TMJ. The patients with disc displacement with and without reduction Wilkes stages II and III were prospectively enrolled for the study. Clinical examination included observation of opening pattern and assessment of pain on VAS scale; Range of motion (ROM) in lateral and protrusive movements; Joint noise; classification of occlusion. Radiological parameters hypomobility, hypermobility, distalisation, joint space open and closed were assessed by using OPG and TMJ views. Arthroscopic findings like vascularity, redundancy, degeneration and adhesions were assessed. All the patients underwent arthroscopic procedure, and were checked for vascularity, redundancy, degeneration and adhesions under LA. Correlation of mouth opening with hypomobility and hypermobility of the joint was present in 50% and 35% of patient respectively. Correlation between clinical finding mouth opening and pain with arthroscopic finding adhesions was statistically significant. The results concluded that distribution of intra articular adhesions may have a more important role in limiting TMJ mobility than the severity of each adhesion and that pain is related to the adhesions.

S. No. 141
Concomitant Total Temporomandibular Joint Replacement and Orthognathic Surgery Using Patient Specific Implants in TMJ Ankylosis: The Future

Dr. Subham S. Agarwal

Abstract

The purpose of the study was to evaluate functional and aesthetic outcomes in a patient with temporomandibular joint ankylosis treated with concomitant temporomandibular joint-total joint reconstruction (TMJ-TJR) and orthognathic surgery (CTOS) using Computer assisted surgical simulation (CASS). Patient-fitted temporomandibular joint-total joint reconstruction (TMJ-TJR) is ideal for TMJ ankylosis treatment as they adapt readily. The titanium mesh allows osseointegration, and posterior stop reduces dislocation. It is also ideal

in situations that require a large mandibular advancement or when the vertical ramus is warped. Patients who were diagnosed with temporomandibular ankylosis or with re-ankylosis of temporomandibular joint after a failed surgery between the ages of 18–45 years were recruited for study purpose. Patients with ankylotic release done using interpositional gap arthroplasty but with persistent deformity requiring joint reconstruction and simultaneous fulfilment of their aesthetic demands were ideal candidates. Preoperatively patients' aesthetic and functional assessment were done by parameters using mouth opening, the maxillomandibular relations, amount of mandibular deficiency leading to class II convex profile and cephalometric parameters were all taken into considerations for presurgical planning. Patient specific implants were designed to reproduce the functional joint movements and to re-establish a class III lever function as in normal joint. Concomitantly, orthognathic surgery was done to establish functional occlusion without presurgical orthodontics at disposal making it challenging task to fulfil. Postoperatively patient was checked for mouth opening, signs of early joint dislocation, aesthetic satisfaction, active jaw movements. Patients so far recruited in the study for concomitant orthognathic and TJR were found to be successfully rehabilitated making PSI an effective option to precisely correct dentofacial abnormality.

S. No. 142
Clinical Factors Affecting Outcome of Arthrocentesis

Dr. Syed Wakeelahmad

GMCBLA

Abstract

The objective of the study was to evaluate clinical variable effect on outcome of TMJ arthrocentesis. Fifty patients underwent TMJ arthrocentesis using ringer lactate contribution of clinical variables like age, VAS, pain level, ROM, time of onset. Logistic regression analysis showed maximum benefit occur in patients age with 25 years. Patients with greater inflammatory component and younger patients benefitted more from orthrocentesis.

S. No. 143
Effectiveness of Arthroscopy in Treatment of TMJ Disorders: An Institutional Case Series

Dr. Abhinav S Suvarna

A. J. Institute of Dental Sciences

Abstract

TMJ internal derangement (ID) is the most frequent type of temporomandibular disorders (TMDs). Management of ID of TMJ can be done both conservatively and surgically depending on the stage of the derangement. Arthroscopy simply means “looking into a joint” and is derived from arthros, which means “joint” and scopien, which means “to view”. The arthroscopy technique yields superior efficacy compared to arthrocentesis in removing articular adhesions, increasing joint function, and decreasing pain for the management of ID. This study aims to assess the role of arthroscopy as a therapeutic modality in ID of TMJ. The objectives of the study were to clinically assess the patients using paramaters like pain, mouth opening and chewing ability both pre operativly and post operativly at 1 week, 1 months and 3 months interval and to evaluate the therapeutic value of TMJ

arthroscopy by comparing both the values. It was an institutional case series which was conducted on 4 patients with TMJ ID who presented to our department. All the patients were diagnosed clinically and radiographically with Stage 4 and stage 5 of TMJ ID according to Wilke's staging and diagnostic criteria were selected randomly. All 4 patients showed significant decrease in pain at 1st and 3rd months, with marked improvement in mouth opening and chewing ability. On the basis of this short-term follow-up study, arthroscopy seems to provide an effective treatment for TMJ ID.

S. No. 144
Temporomandibular Joint Replacement: Dark Past to Challenging Future

Dr. Priyanka Verma

SGT University

Abstract

Temporomandibular disorders (TMDS) encompass a set of clinical conditions that affect the temporomandibular joint (TMJ), the masticatory muscles and the associated tissues. The most prevalent TMDS symptoms are pain in the TMJ region, in the masticatory muscles, and in the neck and shoulder region. The etiopathogenesis of these conditions still remains an enigma, due to the advancements in clinical and surgical methods. Many therapeutic alternatives can be considered, being divided into non-invasive (pharmacotherapy, physiotherapy), minimally invasive (arthroscopy, arthrocentesis) and invasive (arthroplasty) interventions. Initially, conservative therapies aimed at reducing pain and improving joint function should be prioritized. However, patients who do not respond to non-invasive treatment may be candidates for alloplastic or autogenous reconstruction of TMJ. Conventional surgeries, such as gap arthroplasty and arthrectomy, carry a certain risk of relapse and/or open-bite jaw deformity, as do tumor abrasion and resection surgery. Total joint replacement (TJR) of the temporomandibular joint (TMJ) is a promising surgical procedure and device for end-stage diseases of the TMJ. For the functional and aesthetic reconstruction of the oral and maxillofacial head and neck region, TMJ TJR significantly helps maintain the patient's quality of life in terms of a better diet, mastication, speech, and social interaction. This paper reviews the indications and newer protocols for total joint replacement (TJR) of the temporomandibular joint (TMJ).

Category: Dentoalveolar Surgery and Nerve Injuries

S. No. 145
Role of Pentoxifylline in Improving Post-op Outcome After Impacted Mandibular Third Molar Surgery at High Altitude: A Split Mouth R.C.T

Dr. Serat Rahman

Indian Army

Abstract Purpose

To evaluate the effect of Pentoxifylline in improving post-op outcome of impacted mandibular third molar surgery at high altitude.

Materials and Methods

A split mouth double blind randomised control study was designed wherein patients with bilaterally similar mandibular 3rd molar impactions reporting to our dental centre at an altitude of 3810 m were included. Prior to one of third molar surgery, they were given Pentoxifylline 400 mg 12 hourly for 3 days and drug was continued for 7 days post operatively. Pain, swelling and trismus on 1st, 3rd and 7th post op day were noted.

Results

Patients on pentoxifylline had significantly less post-op pain, swelling and trismus as compared to those taking placebo ($p = 0.0001$). No adverse reaction to drug were noted.

Conclusion

Pentoxifylline improves post-op outcome after impacted mandibular 3rd molar surgery at high altitude.

S. No. 146**Timing of Oral Surgical Procedures Following SARS Covid 19 Infection**

Dr. Shruthi R.

Rajarajeshwari Dental College and Hospital

Abstract

The rising pandemic of novel coronavirus disease 19 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS CoV2), is a worldwide crisis for global health and economy. The spread of COVID-19 has had a significant impact on surgical services worldwide and posed a number of challenges. Significant number of patients who were previously infected with covid virus eventually might need extraction of teeth and other maxillofacial surgeries. Given the potential for multisystem involvement, timing of surgery needs to be carefully considered to plan for safe surgery. However, there is no clarity on when the surgery should be done. It is obvious that surgery should not be done during the active phase of the infection. Elective surgery must be safe for staff, other patients and the public. Thus, a shared decision-making regarding timing of surgery after SARS CoV 2 infection must account for severity of the initial infection, ongoing symptoms of COVID-19, comorbid and functional status, clinical priority and risk of disease progression, and complexity of surgery. Surgery in patients who recovered from Covid should be timed to ensure the safest delivery of peri-operative care as it may cause a multisystem disease with both short and long term sequelae which may have an impact on post-operative recovery. The paper highlights the critical review and evidence-based decision on timing of surgical procedures in maxillofacial surgery.

S. No. 147**Insight into the Curse of Trigeminal Neuralgia**

Dr. Sapna Tandon

Career Post Graduate Institute of Dental Sciences and Hospital

Abstract**Introduction**

Peripheral neurectomy (PN) is a minimally invasive procedure, for the management of trigeminal neuralgia (TN).

Aims and Objectives

To assess the efficacy of PN in the treatment of refractory TN and their recurrences in a follow up of 18 months.

Materials and Methodology

Retro-prospective and prospective study was conducted on randomly selected 30 TN patients irrespective of age, gender and socio-economic status. The branch of trigeminal nerve involved was identified according to the site of pain. Then the PN procedure was performed under local or general anaesthesia.

Results

Mean age of the TN patients 53.17 ± 13.84 years. Mostly 26.7% trigger point was located in lower lip followed by 13.3% in upper lip. After 3, 6 and 9 months follow-up, none of the TN patients treated with PN had pain and none had any effect on general activity. However, from 12 months till 18 months' follow up, 2 (6.7%) patients reported of pain.

Discussion

In the present study, left side was involved in 83.3% of the face. Infraorbital and mental nerves were involved in 10 (33.3%) cases each. In 1 case (3.3%) both infraorbital and mental nerves were involved. There were 9 (30%) cases in whom inferior alveolar nerve was involved, mental nerve alone was involved in 10 (33.3%) cases.

Conclusion

PNs are viable treatment alternative for TN, although peripheral neurectomy has chances of reoccurrence but still offer better quality of life in patients for many years without relapse.

S. No. 148**Prevalence of Anterior Loop of Inferior Alveolar Nerve at the Mental Foramen in Various Age Groups in South Indian Population Using CBCT**

Dr. T. J. Gnanasagar

Rajas Dental College and Hospital

Abstract

Inferior alveolar nerve frequently makes a hair-pin bend anteriorly in the inferior alveolar canal before exiting the mental foramen. Surgeries like placing a dental implant and fixing a plate (for orthognathic or trauma) in that area should consider the extent of anterior loop to operate safely. Growth changes in the mandible according to age can affect the anterior loop. Cone-beam computed tomography (CBCT) is widely used to delineate the exact shape of canal at the level of foramen. An observational study was conducted in Rajas dental college and hospital to assess the prevalence of anterior loop of Inferior alveolar nerve at the mental foramen in various age groups using CBCT. CBCT images from 127 patients (254 hemimandibles) from different age groups were randomly selected and evaluated to determine the presence and length of the anterior loop. The length of the anterior loop was then compared based on gender, side and age of the mandible. The data were analyzed using the Pearson chi-square test and linear regression analysis. An anterior loop was identified in 55.9% of the cases bilaterally, and its length ranged from 0.25 to 3.25 mm (mean: 1.00 ± 0.79 mm). The loop had a greater mean length and was significantly more prevalent in females. The loop was more prevalent on the right side compared to left. The study concluded that anterior loop was very commonly found in the age group of 36–45 years and 46–55 years.

S. No. 149
Efficiency of Cold and Room Temperature Saline Irrigations to Reduce the Thermally Induced Complications During Surgical Removal of an Impacted Mandibular Third Molars: A Comparative Study

Dr. Jedidiah Fredrick Abisheg

Sri Ramachandra Medical College and Research Institute

Abstract

Aim

Surgical removal of third molars is often associated with various complications such as pain, swelling, trismus etc. The study aims to compare the saline irrigating solutions efficiency when used at cold and normal temperature to reduce the thermally induced complications.

Materials and Methods

A randomized block design method was conducted with 100 participants of age group between 18 and 40 years as sample size. Study subjects were categorized into two groups: Group I—third molar surgery using normal saline: Group II—third molar surgery using cold saline with 50 subjects each. Pain oedema were two parameters studied pre-operatively and post-operatively after day 1, 3, 5, 7. Intergroup and intragroup comparison were done using non-parametric and parametric tests respectively.

Results

Intergroup comparison shows that pain and oedema were less when cold saline was used in 7 days follow up.

Keywords Third molar, Impaction, Surgical removal, Irrigating solutions, Normal saline, Cold Saline

S. No. 150
Does Systemic or Local Route of Administration of Dexamethasone Influence Inflammatory Complications in Impacted Mandibular Third Molar Surgery? A Systematic Review and Meta-analysis of Randomized Controlled Trials

Dr. Saravanan R.

Jawaharlal Institute of Post Graduate Medical Sciences and Hospital (J.I.P.M.E.R.)

Abstract

The aim of this systematic review and meta-analysis was to determine whether the route of perioperative administration of Dexamethasone influences the inflammatory outcomes following the surgical removal of impacted mandibular 3rd molars. An electronic database search was conducted over a 25-year period up to December 2020. Randomised and quasi-randomised trials assessing the local and systemic route of Dexamethasone in adult patients undergoing mandibular third molar surgery were included. The mean differences or standardized mean differences were extracted and pooled using the fixed-effects or random-effects model. Sixteen trials were included and independently assessed for risk of bias. Four articles with only some concern in risk of bias were considered for meta-analysis. The results of our meta-analysis indicate that the effect of local routes of DXM administration on M3 surgical outcomes is not statistically significant

compared to the systemic routes. Further, the systemic routes provide better outcomes for oedema and pain following M3 surgeries. An accurate picture of the effect of the route of administration of DXM on M3 surgeries can be obtained only with well-designed randomised clinical trials supported with DXM plasma measurements to confirm the absence of a systemic effect when DXM is administered locally.

Comparative Evaluation of Three Different Flaps for Third Molar Surgery

Dr. Akhilesh Pratap

Abstract

To compare three flap designs, buccal envelope flap, comma shaped flap and triangular flap to investigate post operative morbidities associated with such flaps following the surgical removal of third molars. The parameters evaluated were time for raising the flap, incision till bone guttering, post operative healing phase and periodontal status of the adjacent second molar following the surgery. Fifty four patients were divided into three groups and were assessed intra and post operatively. Only minor differences were noticed in the observation of results and in conclusion no statistically significant difference were observed. Studies with larger sample size might be required for further evaluation.

S. No. 151
Comparison Between Efficacy of Turbine Handpiece Versus Conventional Motor Handpiece in Surgical Removal of Impacted Third Molar

Dr. Sunil Kumar

SGT Dental College

Abstract

Lower third molar extraction is one of the most common surgical procedure performed in oral surgery but despite the surgical skills and expertise, complications are likely. These can be pain, swelling, bleeding, infection, fracture of adjacent tooth and nerve damage etc. One of the most essential armamentarium necessary for removal of impacted third molar is a handpiece with a bur used for removal of bone surrounding the tooth or odontectomy. This is usually done using a straight motor driven handpiece rotating at an approximate speed of 30,000 RPM. However, because of the low speed and torque the time taken in extraction can increase significantly making the procedure hectic and fatiguing for the patient as well as the surgeon. Air turbine handpiece is a precision device which can be used for removal of tooth tissue with reasonably less pressure, heat or vibration thus making the cutting facile, less demanding and less time consuming. However, the fear of subcutaneous emphysema associated with its use due to expulsion of air from the air turbine limit its use. Although rare, iatrogenic subcutaneous emphysema can have grave and potentially life-threatening consequences. This study aims to compare the efficiency and the complications associated with the use of air turbine handpiece in comparison to conventional motor driven hand piece in the removal of impacted third molars.

S. No. 152**Comparison of Conventional Rotary and Piezo Surgical Technique in Removal of Impacted Mandibular Third Molar***Dr. P. Shameem Hamza**MES Dental College Perinthalmanna***Abstract**

Third molar surgery is a common procedure performed in dentistry. Conventional bur technique produces irregular surface and is accompanied by serious disorders such as pain, edema and trismus. Piezoelectric surgery is based on ultrasonic microvibrations which provide precise and selective cutting of bone without traumatizing the adjacent soft tissues. The aim of the study is to compare the duration, postoperative pain, edema, trismus and patient acceptance following surgical removal of impacted third molar using Piezo surgery and conventional technique. 42 patients with impacted mandibular third molars were included, and grouped into two; group A (treated with conventional rotary technique) and group B (treated with Piezo-surgery). Duration of surgery, pain, trismus and swelling were the parameters taken in consideration. The patients were evaluated on 1st, 3rd and 7th postoperative day. Postoperative pain, trismus and edema was reduced with piezosurgery compared to conventional technique. Even though duration of time was longer with Piezosurgery patient comfort was found to be better. Piezosurgery is a promising, meticulous, innovative ultrasonic technique for safe and effective bone removal. It is also more efficient in controlling postoperative pain and faster improvement in trismus and swelling. However, it is more time consuming and expensive tool.

S. No. 153**Reduction of Postoperative Sequelae After III Molar Surgery Using Serratiopeptidase: A Prospective Study***Dr. Chukkambotla Yashwanth Raj**SVS Institute of Dental Sciences***Abstract**

Postoperative sequelae associated with extraction of impacted 3rd molars include pain, trismus and swelling which occur due to the local inflammatory reaction. Serratiopeptidase, which is an extracellular metalloprotease has an anti-inflammatory, antiedemic and fibrinolytic activity. The aim of the study is to determine the reduction in postoperative inflammatory sequelae using Serratiopeptidase. Patients who included in the study underwent surgical extraction under local anaesthesia. Surgical technique used was standardised for all the patients. Patients were divided into two groups. Swelling, pain and mouth opening were measured in both the groups. Swelling and pain reduced considerably in patients of group I. Mouth opening has no difference in both the groups. A randomised controlled trial by Tamimi et al. stated that Serratiopeptidase resulted in better anti-inflammatory action than placebo over 5 days. In conclusion, the present study provide direct clinical evidence that postoperative administration of the proteolytic enzyme serratiopeptidase significantly reduced the occurrence of post-surgical swelling and pain but had no effect on postoperative trismus.

S. No. 154**Effect of Submucosal Injection of Dexamethasone for the Control of Postoperative Sequelae After Third Molar Surgery: A Randomized Controlled, Triple Blinded, Clinical Trial***Dr. Kalung Onia**GDC Kottayam, Kerala***Abstract**

Surgical removal of lower third molar is the most frequent intervention in oral surgery. It may vary in difficulty and in the degree of trauma caused to the surrounding tissues. Pain and edema after surgery or trauma has always been associated with various inflammatory mediators produced at the site of injury. Prevention and management of postoperative consequences following lower third molar surgery are an essential part of the clinical practice, thus, many attempts have been made to reduce these sequelae by using anti-inflammatory drugs. The rationale behind preemptive administration is that corticosteroids should be given before the onset of the inflammatory process and their use to limit postoperative edema has been advocated. This study aimed to compare efficacy of preoperative and postoperative submucosal administration of dexamethasone in reducing the postoperative sequelae following impacted third molar surgeries. This prospective, randomized controlled, triple blind study was done on 75 patients at Department of Oral and Maxillofacial Surgery, Government Medical College and Government Dental College, Kottayam. Statistically significant difference was obtained between the patients given dexamethasone before surgery and after surgery regarding trismus, pain and edema. The submucosal injection of 4 mg dexamethasone preoperatively is an effective therapeutic strategy to reduce swelling, trismus and pain after the surgical removal of impacted lower third molars.

S. No. 155**Local Anaesthesia with BOOST***Dr. Guda Rajesh**SVS Institute of Dental Sciences***Abstract**

The aim of this study was to compare the efficacy of dexmedetomidine added local anaesthesia with conventional LA. A prospective comparative randomized double-blind control study was conducted on 15 patients who required surgical removal of bilateral impacted mandibular third molars. In Group I, plain Lignocaine HCl with dexmedetomidine was administered as inferior alveolar nerve block (IANB) to the impacted mandibular third molar on one side. Group II, Lignocaine HCl with adrenaline was administered as classical IANB to the on other side. Patients were assessed for the onset of action of anaesthesia, duration of analgesia, pain perception, and vital signs. The mean values for the onset of anaesthetic action was short, duration of anaesthesia was longer in group I compared to group II. Pain perception elicited statistically significant results with less perception of pain in group I. The vital parameters were not statistically significant. In this study, we observed that the addition of dexmedetomidine to lignocaine HCl for IAN nerve blocks significantly shortened the onset of action and prolonged the block duration, as well as improved postoperative analgesia in terms of the need for fewer analgesics in the postoperative period. Further research need to validate the results our study which shows encouraging outcomes by adding dexmedetomidine to LA.

S. No 156**Assessment of the Effect of PRF Application on Healing and the Concentration of C-Reactive Protein During the Surgical Removal of Third Molars***Dr. Pavithran A.**Sri Ramachandra Institute of Higher Education and Research***Abstract**

Extraction procedures for mandibular third molar is routine oral surgical procedure day. Local inflammation resulting from surgery, and the pain that patients experience, often make it impossible to take up daily life activities, such as work or sports. Growth and anti-inflammatory factors, located in the fibrin network, have a positive effect on tissue-healing processes and should also reduce local inflammation. Platelet-rich fibrin applied locally influences processes such as angiogenesis, osteogenesis, and collagenogenesis. It also affects mesenchymal cell lines and anti- and pro-inflammatory mediators. Due to the autologous origin of the material, their use in guide bone regeneration (GBR) is widespread in dentistry. The results of previous studies indicate that the use of PRF in the treatment area significantly reduces postoperative pain. C-reactive protein (CRP), which is an acute-phase protein, appears in the blood as a consequence of inflammation. Due to the dynamics of changes in concentration of CRP, it is a protein that is sufficiently sensitive and is used in studies to monitor the tissue healing process. Hence we conducted a pilot study on 10 healthy individuals to assess the effects of PRF on healing and concentration of C-reactive protein levels. A faster decrease of CRP levels (statistically significant) was shown in patients who used PRF after the procedure. Additionally, it accelerated healing and reduced the occurrence of a dry socket close to 0.

S. No. 157**Comparison of Conventional Radiography with CBCT in Assessment of Relationship of Root Apex of Third Molar to IAN Canal***Dr. Tabassum, Dr. Chitra Chakravarthy**Navodaya Dental College***Abstract**

The aim is to corroborate the IOPA and OPG findings and compare with CBCT in determining the position of IAN canal to the root apex of mandibular third molar. 15 mandibular molars indicated for surgical extraction which were in close proximity to inferior alveolar nerve canal are selected. 7 radiologic signs based on Roods classification were assessed on the IOPAR and OPG and these signs is confirmed using a CBCT. CBCT helped in assessing the presence of canal buccally, lingually or between the roots whether the canal is incontact or not in contact away from the roots of the third molar. Roods radiologic signs which were observed in an IOPA were also seen in panoramic radiographs and confirmed in CBCT. IOPA and OPG both are equally efficient in assessing the risk of nerve damage in relation to the roots of third molar. Additional information obtained from a CBCT helped surgeon to plan the surgical procedure to minimize risk of nerve damage Radiologic signs which are seen in IOPA are also observed in panoramic radiographs and confirmed in CBCT. IOPA and OPG both are partially efficient in assessing the risk of nerve damage in close approximation roots of the third molar.

CBCT has additional advantages in visualization of exact relationship of canal to the root apex of third molar, restabilising it as a gold standard for confirming the diagnosis before the surgical extraction of mandibular third molar.

S. No. 158**Effectiveness of Local Drug Delivery System of Dexamethasone Infused Gelfoam in Mandibular 3rd Molar Surgery***Dr. Uday Juturu**SDM Dental College***Abstract**

Mandibular third molar (M.T.M.) surgeries are one of the most commonly performed surgeries in practice and are known to result in a number of post-operative sequelae. This impacts the quality of life of the patient post operatively. There have been studies done with respect to peri-operative administration of dexamethasone in patients undergoing M.T.M. surgeries and impact on post-operative sequelae. The aim of the study is to assess the effect of local drug delivery system of gel foam-soaked dexamethasone (D.X.M.) on the post-operative sequelae. A double-blind placebo split mouth randomized control trial was conducted. 50 patients indicated for surgical extraction of bilaterally impacted M.T.M.S, from December 2018 to October 2020, were included in the study. The local drug delivery system on D.X.M. soaked gel foam was found to significantly reduce the postoperative pain and trismus in the early and late postoperative period but did not have a significant impact on the postoperative edema and wound healing. Thus, it was effective in improving the postoperative Q.O.L. in patients on the side of M.T.M. extraction where it was used. The results suggest that using local drug delivery system for D.X.M. in patients undergoing M.T.M. extractions is effective in reducing the patient discomfort and improving patient compliance.

S. No. 159**Post Extraction Pain Management with Hilotherapy***Dr. Rajala Venkata Subbaiah**SVS Institute of Dental Sciences***Abstract**

Hilotherapy is a long-standing therapeutic technique that has been frequently applied in sports injuries and surgical procedures for pain management and postoperative care in the field of medicine. The present study was conducted to evaluate the effect of cold saline irrigation on postoperative pain. This paper discusses about the effectiveness of cold saline irrigation as an agent of Hilotherapy in reducing postoperative pain. The sample consists of 20 patients who reported to S.V.S Institute of Dental Sciences, Mahbubnagar, Telangana for therapeutic extractions and cold saline irrigation at 4°C on one side and normal saline on another side was done immediately after extraction. Pain score was noted by VAS. Regular follow up was performed in evaluating postoperative pain at an interval of 4 h, 8 h and postoperative day one. It was found that pain score in the cold saline group has ranged from 0 to 1 (VAS) which was significantly lower than the control group (6–8). Prithviraj D, et al.; conducted to

evaluate the effect of cold saline as final irrigant on post-operative pain. To conclude, in the present study there is significantly lesser incidence of postoperative pain and reduced analgesic consumption for the cold saline group.

S. No. 160
Local versus Systemic Preoperative Dexamethasone Injection in Third-Molar Impaction Surgery: Comparative Double-Blind Study

Dr. Arpit Gupta

Maulana Azad Institute of Dental Sciences

Abstract

The aim of the study was to evaluate and compare the effect of preoperative systemic and local intramuscular administration of dexamethasone on pain and mouth opening and postoperative swelling following mandibular third molar impaction surgery. The study comprised of 150 cases graded as moderately difficult according to Pederson difficulty index, which were subdivided into two groups. In Group I, 2 ml of Dexamethasone was injected intramuscularly in ipsilateral masseter muscle preoperatively. In Group II, 2 ml of Dexamethasone was injected in the deltoid muscle preoperatively. All the patients were evaluated for pain, mouth opening and postoperative swelling at 1st, 3rd and 7th post-operative day and intergroup comparisons were made. Both the groups showed improvement in mouth opening with resolution of pain and post-operative swelling in the last follow-up. However, Group I showed considerable reduction in swelling and pain with less trismus when compared with group II at all intervals. Local intramuscular injection of Dexamethasone through intra-buccal approach can be a simple useful adjunct in the surgical treatment of impacted third molars for minimizing swelling, trismus, and pain following surgical extraction.

S. No. 161
Piezolingual Split Technique in Extraction of Impacted Mandibular Third Molars

Dr. V. V. Swathi Priya

Coorg Institute of Dental Sciences

Abstract

The most popular approach for surgical removal of impacted third molars is buccal bone guttering technique. However, this approach cannot be followed in lingually placed teeth. Over the years many authors have modified lingual split technique for removal of lingually placed impacted mandibular third molar, one such modification is lingual split of mandibular third molar using piezosurgery. Aim of the study was to evaluate the efficacy of lingual split technique using piezo surgery for the transalveolar extraction of lingually impacted mandibular 3rd molars. Objective is to evaluate primary outcome variables like success rate, operating time and the incidence of complications and secondary outcome variables like pain, swelling, restricted mouth opening and incidence of lingual nerve injury. In this prospective study we have include 10 healthy consenting individuals of age group 18–40 years who were indicated to undergo prophylactic surgical removal of impacted mandibular third molar with ideal

condition for lingual split where the tooth is lingually placed using piezo were taken up for the study. After statistical analysis results revealed that lingual split technique using piezosurgery could minimize the drawbacks of conventional lingual split technique. The selective cutting of piezosurgery, working on mineralized tissues while preserving all soft tissues that may come into contact with the tips during their use. Our results revealed that lingual split technique using piezosurgery could minimize the drawbacks of conventional lingual split technique. Piezosurgery seems to be a good option in removing lower third molars when a lingual access is clearly indicated with minimal post-operative complications.

S. No. 162
Comparison of Platelet Rich Fibrin versus Collagen on Healing After Impacted Third Molar Extractions

Dr. Nissi Evelyn R.

Government Dental College and Hospital, Hyderabad

Abstract

Impacted third molar extraction is the most common procedure performed by an oral surgeon. Alveolar defect distal to the second molar is a common sequelae after an impacted third molar extraction. Hence, various bone substitutes, biologics were used to counter this side effect. The aim is to compare the efficacy of platelet rich fibrin (PRF) and Collagen in healing and bone regeneration following impacted mandibular third molar extraction. The study consisted of 20 patients who required extraction of bilateral impacted mandibular third molar for whom closure was done with PRF on one side and collagen on the other. PRF showed lesser swelling on the first post-operative day when compared to collagen with the mean of 259.80 and 396.75 respectively and the swelling decreased with time. 75% of cases with collagen showed dehiscence whereas only 35% with PRF showed dehiscence. Radiographic bone density was found to be same in both postoperatively. PRF showed better soft tissue healing, but bone regeneration was found to be same in both. So PRF can be considered a better material for healing after mandibular third molar extraction.

S. No. 163
The Use of Alveolar Distraction Osteogenesis for Ridge Augmentation Procedure in Nlower Jaw: A Prospective Study

Dr. Zonunmawia

Chandra Dental College and Hospital, Lucknow

Abstract

Alveolar distraction osteogenesis is a procedure that allows augmentation of alveolar ridge height with the formation of new boneas well as obtaining a significant increase in the surrounding soft tissues, offering a predictable result, with low morbidity and infection rates and a significantly shorter waiting period for rehabilitation with implants (10 weeks) in comparison with the traditionally used methods. Hence the present in vivo study was taken to clinically evaluate the outcome of alveolar distraction osteogenesis along with the intraoperative and postoperative complications. The study involves 25 patients which were in the age group of 23–54 years.

Healthy patients with vertical deficient alveolar ridge were selected who did not have any history of major systemic disease. A thorough pre operative evaluation was carried out on each patient. Distraction was carried out in two stages: Stage 1: Placement of the distraction device and the distraction. 0.5 mm distraction twice daily carried out for 7 days, once in the morning and at night. (Half turns twice daily). Consolidation period was for 1 month after the distraction phase. Stage 2: Surgical removal of the distraction device after the consolidation phase.

S. No. 164

Functional Evaluation of the Behavior of Masticatory Muscles in Zygomaticomaxillary Complex Fracture: A Prospective Study

Dr. Priyanka Bhoi

Rungta College of Dental Sciences and Research

Abstract

The purpose of this study is to functionally evaluate the behavior of the masticatory muscles (masseter and temporalis) following zygomaticomaxillary complex (ZMC) fractures by assessing bite force, electromyography (EMG), and mandibular movements. Group I consisted of 20 patients with unilateral ZMC fractures who were treated surgically with one-, two-, or three-point fixations at the frontozygomatic, infraorbital, or zygomaticomaxillary buttress region as per clinical and radiological assessments. Group II control group included 20 normal patients. The muscle activity was functionally evaluated before and after the surgery for a period of 6 months. The evaluation consisted of bite force measurement, EMG analysis of masseter and temporalis muscles, and measurements of mandibular movements. There was an increase in bite force and EMG activity throughout the evaluated postoperative period, but at the end of 6 months, the values were still below the control levels for majority of the patients. Maximum mouth opening increased considerably after the surgery. According to bite force and EMG, the masticatory musculature returned to near normal levels by the 3rd month after the surgery. Management of fractures of the zygoma by open reduction and fixation raises the question of the location of fixation points owing to the action of masseter and temporalis on the ZMC. This study supports the current clinical concept of minimised fixation in treating ZMC fractures.

S. No. 165

Piezoelectric versus Conventional Technique in Oral and Maxillofacial Surgery

Dr. Nayan Paharia

Divy Jyoti Dental College

Abstract

In maxillofacial surgery, bones are cut with mechanical instruments such as saws or drills. Rotating bone-cutting instruments are potentially injurious because of the production of excessively high temperatures during osseous drilling. Such temperatures can endanger

marginal osteonecrosis which ultimately impairs bone regeneration. Piezosurgery or the application of piezoelectric, create ultrasonic vibrations to make precise and safe osteotomies. The instruments used for ultrasonic cutting of bone create microvibrations that are caused by the piezoelectric effect. Piezoelectric surgery is very efficient for osteotomy because it works selectively—the soft tissues, including nerves and blood vessels, are unaffected. This represents a significant advantage over the use of a bur. Piezoelectric techniques were developed in response to the need for greater precision and safety in bone surgery than was available with other manual and motorised instruments. The study of 60 systemically healthy individuals was deliberated to determine and compare the post-surgical inflammatory sequela (facial swelling, pain and healing) soft tissue injuries following osteotomy using a piezosurgery and conventional rotary burs. Individuals with Surgical extraction in cases of impacted tooth, bony spicule presence, surgical extraction in cases of retained tooth were included in the study. Patients with history of allergy to drugs and anesthetics, history of systemic diseases that would contraindicate surgical treatment were excluded from study. This study is done because on these prospective available studies are less, and so the topic of interest is gained.

S. No. 166

Efficacy of Secondary Closure Technique After Extraction of Third Molars

Dr. Aastha Choudhary

Vyas Dental College and Hospital

Abstract

Surgical extractions of mandibular third molar may range from easy to extremely difficult depending on the location, depth, angulation, and density of the surrounding bone. Postoperative complications have become the primary concern for patients. Several studies have suggested that postoperative complication are closely related to surgical suture techniques, surgical drainage and the use of anti-inflammatory drugs. In 2012, a structured review of 14 randomised controlled trials (RCT) aimed to find out which secondary closure techniques were associated with fewer postoperative complications. The results showed that differences in post operative pain and facial swelling between closure techniques are likely to be small; however, the high risk of bias, imprecision, and heterogeneity among the trials produced little confidence in the estimates. A total of 20 patients, divided into two groups randomly: group A, with 10 patients in which primary closure was done; group B, with 10 patients in which secondary closure was done. A comparison between two groups was done in terms of postoperative pain, swelling, trismus at first, third, and seventh postoperative days. It is deduced that there was more trismus in the primary closure group than in the secondary group during both stages. Our findings suggest that secondary closure causes less pain, facial swelling, and trismus in both early and late stages of surgical removal of mandibular third molar, and therefore it improves the quality of life by reducing postoperative discomfort.

S. No. 167**Bevel Tip Deformation of Unused and Used Needles for Palatal Infiltration of Local Anaesthetic***Dr. G. Sreejee**Sri Ramachandra Institute of Higher Education and Research***Abstract**

Majority of dental procedures require a local injection of anaesthetic solution at/near the surgical site. The pain caused by those injections is one of the primary sources for fear and anxiety in dental patients especially during palatal infiltration. Retracting a barbed needle may cause more injury to the soft tissue thereby increase the pain and anxiety of the patient. Therefore, the aim of this study was to evaluate quantitatively the deformation angle of the needle bevel tip in unused and used needles for palatal infiltration procedures. The needles were divided into four groups (5 per group): Group 1, BD Glide™ U-40—insulin needle (31 G × 6 mm); Group 2, Dispo van® needle (26 G × 13 mm); Group 3, BD Emerald™ needle (24 G × 25 mm), and Group 4, Unolok® needle (26 G × 38 mm). The new and used needles are evaluated using scanning electron microscope (SEM) to evaluate the bevel tip deformation quantitatively. All the groups showed a statistically significant difference between the used and unused needles and amongst the used needles also ($P = 0.05$). All needles used for palatal infiltration of local anaesthetic showed bevel tip deformation after their use and also, needles that were not used clinically showed bevel tip deformation.

S. No. 168**Piezosurgery versus Conventional Method Alveoloplasty: A Comparative Study***Dr. Vandana Pandey**Yenepoya Dental College***Abstract**

Conventional alveoloplasty procedure using manual instruments results in higher resorption of the residual alveolar ridge, which is unsuitable for denture construction. In order to minimize the limitations of conventional tool. Piezosurgery was introduced. It is a novel technique, assuring precise system for removal of hard tissue, sparing the soft tissues. Hence, aim of this study was to evaluate the effect of piezosurgery-assisted alveoloplasty compared to that of the conventional alveoloplasty. The study sample consisted of 10 edentulous patients with bilateral bony projection requiring alveoloplasty. Conventional alveoloplasty was done on one side with bone rongeur and file and on contralateral side piezosurgery-alveoloplasty was done and clinical parameter were assessed such as operating time, postoperative pain assessment at day 3 using VAS scale and healing at day 7 using Landry, Turnbull, and Howley healing index using SPSS version 21 software. There was a statistically significant difference between both groups with respect to the outcome variables such as operating time, VAS at day 3, and healing index at 7th day with lower mean of operating time, higher mean rank of VAS, and lower mean rank of healing index for conventional group as compared to piezo group ($P < 0.05$). Among the various instruments and techniques used for alveoloplasty, piezosurgery has proved to be a better alternative by reducing patient's discomfort, and accelerating the healing process, which makes the future prosthesis replacement easier.

S. No. 169**Efficacy of Low Level Laser Therapy in Reducing Pain, Swelling and Trismus Following Third Molar Extraction Surgery***Dr. Ansari Neelofar Ashfaque Ahmed**Yenepoya Dental College***Abstract**

Removal of impacted third molar is one of the most common procedures performed in maxillofacial surgery. Common postoperative discomfort or complications include pain, swelling and trismus which are triggered by inflammatory processes initiated by surgical trauma. Low level laser therapy (LLLT) is an advantageous technique and depending on the dose, wavelength and condition of the target area, it can promote a variety of biological responses. These responses include the acceleration of tissue healing, improvements in bone repair, restoration of normal nerve function after injury, moderation of inflammatory responses, stimulation of analgesia, reduction of swelling, and regulation of the immune system. The purpose of this study was to assess the efficacy of low-level laser therapy in reducing pain, swelling, and trismus following impacted third molar extraction surgery. Clinically and radiologically (OPG) confirmed cases of bilateral symmetrical impacted mandibular third molars indicated for extraction were taken up for the study. This study was carried out as a randomized controlled clinical trial: split mouth design. Nine patients were treated using LLLT on one side and control as the other side where no laser was given. After surgery laser therapy was administered at 4 j/cm² density, with a laser with diode wavelength of 810 nm and output power of 100 M_w intraorally and extraorally on the test side. The laser therapy was repeated again on 2nd, 3rd and 4th day. Facial swelling, interincisal opening, pain and healing were evaluated on 2nd, 3rd, 4th and 7th day.

S. No. 170**Accuracy in the Dimension of Extracted Tooth with Intraoral Periapical Radiograph: A Comparative Study***Dr. Akshay Nambiar**Yenepoya Dental College***Abstract**

Intraoral periapical radiographs (IOPAR) are widely used for the preoperative planning and evaluation for most minor oral surgical procedures owing to its simplicity, significantly lower cost, less radiation exposure and easy availability in a dental clinical set-up. The periapical radiograph, using paralleling technique, is considered the clinical gold standard for measuring tooth length. The aim of this study is to assess the accuracy and reliability of intraoral periapical radiograph with the extracted teeth. The study is comprised of 54 patients. After extraction of the indicated tooth, the teeth will be cleaned of any adherent soft tissue, bone fragment. These teeth will be placed in a container with 5% sodium hypochlorite solution. For each extracted tooth, the actual measurements for tooth length, crown length, and root length will be measured with a vernier calliper with a least count of 0.01 mm. After obtaining the actual length of the tooth with the vernier calliper, the length of the tooth is measured from the intraoral periapical radiograph using a vernier calliper. By comparing the length of the actual tooth with that of an IOPAR, it was found out that the difference that was obtained is not statistically significant.

The lack of difference is probably because of the anatomic shape of the tooth which permits the film to be positioned very close to the teeth, almost parallel to the long axes of the teeth.

S. No. 171

Does Single Puncture Extraoral Nerve Block Provide Optimal Anesthesia for Ipsilateral Maxillary and Mandibular Arches?

Dr. Meenakshi Pandey

Meenakshi Ammal Dental College and Hospital

Abstract

Impacted 3rd molar removal requires multiple injections intraorally. This study highlights single puncture extraoral nerve block. The aim is to assess efficacy and distribution of EO using standard evaluation parameters for peripheral branches and compare it with conventional intraoral nerve blocks. Third molar of both arches removal ipsilaterally, included. Pathology/comorbid patients excluded. Study group—extraoral block (infra-zygomatic approach) and control group—extraoral nerve block, given by a single operator. primary outcomes—neurosensory testing—pin prick, electric pulp testing, VAS score and secondary outcomes—anxiety, Fromme's scale, Time of onset were assessed. The results $n = 34$, with 17 in each group were: nerve assessment—ASA, NP and incisive branches which had higher frequency in control group. VAS score—pain during injection showed higher values for study group. Anxiety—baseline and post-injection SBP showed higher values in study group. Time of onset—higher for study group. Statistically non-significant difference seen for values between groups ($p > 0.05$) for all other variables. EO is more effective over posteriorly, peripheral branches better anesthetized by intraoral blocks. Anxiety towards receiving extraoral block due to lack of awareness to the technique. EO is safe and efficient. Limitation of this study being EO not performed in major procedure to know more about its range of application. More trials are encouraged hence for better understanding and application.

S. No. 172

Use of Piezosurgery in Alveoloplasty

Dr. Neha Samanta

KVG Dental College, Sullia, D.K.

Abstract

The term alveoloplasty refers to the restructuring or resurfacing of the alveolar process bone to provide a functional skeletal relationship. In multiple extractions, post extraction irregularity exists, which warrants the need for extended alveoloplasty.¹ Alveoloplasty can be performed by use of bone rongers or bone files. Large bony irregularities can be removed with the help of conventional rotary instruments or piezoelectric unit. Piezosurgery has been routinely used for third molar extraction surgeries and in implant surgeries, however its use in the field of pre-prosthetic surgeries is very less documented. The purpose of this study was to evaluate the efficacy of piezosurgery in patients requiring alveoloplasty. This was a prospective in vivo study conducted at KVG Dental College and Hospital, Sullia. The study sample consisted of—edentulous patients with bony spicules requiring alveoloplasty. The primary outcome

variables assessed were time required for alveoloplasty, postoperative pain using visual analogue scale (VAS), and postoperative healing using Landry, Turnbull, and Howley healing index. The outcome variables were statistically analyzed using unpaired t test. A total of number of 18 individuals were included in the current study. The mean age is 45 years out of which 11 (61.1%) were male and 7 (38.8%) were female. The mean time taken was 35 min. There were very less post-operative complications like swelling, wound dehiscence and wound necrosis with good healing piezosurgery has been linked to lower postoperative sequelae, particularly in terms of postoperative pain, wound dehiscence, wound necrosis and infection. When compared to the conventional technique, the average time for performing the entire alveoloplasty operation using piezosurgery was nearly the same. Piezosurgery when used in alveoloplasty not only lowers patient postoperative discomfort, but it also preserves alveolar bone integrity by not disrupting the soft tissue and hard tissue architecture, allowing for quicker tissue healing and making future prosthesis replacement easier.

S. No. 173

Comparative Study of Two Materials in Intraoral Wound Closure in Apicectomy

Dr. Prashant Jayprakash Dewang

CSMSS Dental College Aurangabad

Abstract

Incision is basic step for surgical procedures. After surgical approach, suitable closure, optimum maintenance of surgical area are most important factors that affect proper wound healing and surgical success. Wound may approximated with sutures, staples, skin closure strips, topical adhesives. The aim is to evaluate efficacy of *N* butyl-2-cyanoacrylate bio-adhesives for IntraOral wound closure in apicectomy. The objective is to evaluate post-operative healing with *n*-butyl cyanoacrylate in comparison with conventional 3–0 MERSILK sutures in apicectomy procedures for closure of mucosal incisions. Randomized prospective comparative observational study on 40 patient which divided in 2 groups (20 in each group) was done in 12 months. Group I (TEST GROUP): Apicectomy Incision closed with *N*-butyl 2 cyanoacrylate material. Group II (CONTROL GROUP): Apicectomy Incision closed with 3–0 Mersilk suture. Post-operative hemostasis, wound dehiscence and pain was evaluated. Statistically significant difference was found between test and control group postoperatively for pain. No statistically significant difference was found between test and control groups for wound dehiscence and haemostasis postoperatively. Postoperative clinical evaluation in first 3 days revealed that pain was significantly higher in control group. Study concluded that *N*-butyl cyanoacrylate, as tissue adhesive, is not cytotoxic in vivo and can be used alternative to sutures in apicectomy procedure. Cyanoacrylates excellent alternatives for suture, they ensure superior wound healing in tension free wounds and better acceptance from patients.

Category: Dental Implantology, Pre-implant Surgery and Grafting

S. No. 174

Single Piece Zygomatic and Pterygoid Implant as an Oncology Tool

Dr. Vivek Gaur

Jaipur Dental College, Jaipur

Abstract

Smooth surface single piece bi-cortical implants functions according to the principles of traumatology and orthopedic surgery. These implants when engaged in second and third corticals which are zygomatic and pterygoid bone full-fill the aim and indication for prosthetic restoration of resorbed jaws which may be of prolonged atrophies or because of resection surgeries and trauma. Because of minimal component and ease of placement with least procedural trauma to patient, oncology tool is the right term.

S. No. 175

Proposed Drilling Protocol in Enhancing Primary Stability of Implants in Low Density Bone- and Ex-Vivo Study

Dr. Mamatha N. S.

Rajeshwari Dental College, Karnataka

Abstract

Background

Dental implants have revolutionized the oral rehabilitation in partial and completely edentulous patients. In low density D3, D4, bone type achieving primary implant stability is extremely challenging. An adequate primary implant stability is of paramount importance for Osseointegration. The importance of surgical technique arises from previous clinical studies. The high Implant failure rate reported in low density bone can be solely modified with the surgical protocol and increase the success rates up to 93–97%. Therefore, careful surgical planning and execution are crucial for a successful outcome, as surgical trauma is associated with biological failure of Implants. There are various modifications in the surgical techniques to increase primary stability. The most advocated is under sized drilling technique, Osteotome technique and Osseo densification technique. Hence in this study a drilling technique is Proposed to enhance primary stability of the implant in low density bone.

Aim and Objectives

To compare and evaluate the primary stability of implants placed with standard drilling technique, osseo densification technique (OT) and proposed drilling technique in low density bone.

Material and Methods

A total of 75 Implants (4.2–11.5 mm) were placed in the fresh bovine bone which mimics low density bone. The implants were divided into three groups of 25 each, in Group 1 Standard drilling protocol, Group 2 Osseo densification technique (OT) and Group 3 Proposed drilling protocol was followed. The parameters evaluated were maximum insertion torque (IT) and Implant stability quotient (ISQ) with Resonance frequency analysis.

Results

The IT values and ISQ values were higher in the proposed drilling protocol when compared to Standard drilling protocol and was comparable to OT.

Conclusions

The proposed technique is beneficial in enhancing the primary stability of implants in low density bone and is comparable to OT.

S. No. 176

Immediate Rehabilitation of Atrophic Jaws

Dr Rushi Patel, Dr. Vydehi Bhat

Narsinghbhai Patel Dental College and Hospital

Abstract

The longer life spans and early loss of teeth results in increased population with severely resorbed jaws. With the advances in dental implantology, people opting for fixed rehabilitation are increasing gradually. Bone grafting provides a predictable solution for rehabilitation of resorbed ridges but it increases the total treatment time and the total treatment cost. It also incurs the necessity of secondary surgical sites for harvesting autogenous bone grafts. The hard and soft tissue grafting also comes with some degree of resorption. Keeping all these factors into consideration the cortical implant concept or all on 4 concepts have come into practice with their own limitations and disadvantages. Here we present a case series which includes cases treated with conventional implants in a traditional manner without using a bone graft material and with some modifications in prosthetic design.

S. No. 177

Vertical Alveolar Distraction: Growing Bone Naturally

Dr. Satish Kumaran

M.R. Ambedkar Dental College and Hospital

Abstract

Background

It is a common occurrence, to be presented with totally or partially edentulous patients, for whom the ideal oral rehabilitation is with dental implants. But often, many times there exist unfavourable local conditions with respect to the ridge anatomy, which inhibit the placement of dental implants. One of the more common problems is the absence of vertical volume of bone, to place long enough implants, with predictable stability and long-term survival. To combat this challenge, vertical alveolar distraction osteogenesis was attempted with a high degree of surgical success.

Aim

To explore the pros and cons of using vertical alveolar distraction osteogenesis (VADO) to augment the vertically deficient mandibular ridge.

Objectives

To evaluate the clinical outcome of:

1. VADO for correction of vertically deficient edentulous ridges
2. Dental implants placed in the distracted areas.

Materials

Vertical alveolar distractor system (SIRAG SURGICALS).

Methodology

The study includes patients of age group 18–65 years with atrophic alveolar crests.

Result

With VADO satisfactory long-term survival of dental implants is obtained, as also a remarkable increase in vertical height of deficient mandibular bone.

Conclusion

VADO has the advantage of producing predictable growth of bone as well as soft tissue. The quality of bone formed is naturally better than that obtained via other bone regeneration methods because it allows the growth of the subject's own bone from the same localized region. Also, no second surgery to harvest bone is necessary, thereby nullifying donor site morbidity.

S. No. 178

Evaluation of Stability of Implants Placed Simultaneously with Lateral Window Sinus Augmentation Using a Putty Alloplastic Bone Substitute: A Prospective Study

Dr. Chander Prakash

Teerthankar Mahavir University, U. P.

Abstract

Inadequate alveolar bone volume is a common limitation in the posterior maxilla since advanced resorption following premature tooth loss is frequently combined with the pneumatization of the maxillary sinus. Due to this common problem the rehabilitation of posterior maxilla with implant supported prosthesis is a nightmare. The sinus lift procedure aims to create the bone volume for the placement of implant of requisite length. The present prospective study is to evaluate the primary implant stability placed simultaneously with direct sinus lift along with calcium phosphosilicate putty alloplastic bone substitutes (CPC) with minimum residual bone height = 5 mm. Implant stability is very important for the long-term success of implant therapy, and it has to be obtained at the time of implant insertion and maintained over time. Putty alloplastic bone substitute was used effectively to augment the maxillary sinus region and also to stimulate the bone regeneration. A more viscous consistency of the biomaterials used for sinus augmentation could positively affect the primary stability of an implant placed simultaneously with a sinus lift procedure. Thus, it is suggested that the remaining available bone and putty both together can constitute in obtaining the primary implant stability. The present study is undertaken to evaluate the effect of putty alloplastic bone substitute on primary implant stability and stability during the gradual ongoing process of osseointegration.

S. No. 179

Are Basal Implants an Option?

Dr. Beena Roopak

Rajeshwari Dental College and Hospital

Abstract

The need of sufficient bone around the endosseous implants is critical for their success. In the maxillary sinus region, the reduction of the bone height due to post extraction pneumatization and resorption poses a challenge for implant placement. Whereas in the mandibular region if the height of bone is compromised, the placement of endosseous implant may lead to injury to the neurovascular bundle. So, implant placement in severely atrophic jaws is especially challenging because of the poor quality and quantity of the future implant bed. Restoring the oral functions and aesthetics in these patients becomes a challenge and requires bone grafting or artificial gingival tissue. Basal implantology also known as bicortical implantology or just cortical implantology is a system which utilizes the basal cortical portion of the jaw bones for retention. These unique implants include the application of the rules of orthopaedic surgery, the basal implants are also called as "orthopaedic implants" to mark a clear distinction between them and the well-known term "dental implants." These implants when placed in this bone can also be loaded with teeth immediately. However long-term evidence-based studies are required for optimal utilisation of these implants. In this paper we would like to discuss the boons and banes of Basal implants.

S. No. 180

Implant Placement with Immediate Low Insertion Torque: A Case Report

Dr. Abhilasha Yadav

Awadh Dental College and Hospital

Abstract

Endosseous dental implant therapy is rapidly becoming the prosthetic standard of care for a vast array of clinical applications. However, despite the high success rate of endosseous implant therapy, it has yet to achieve wide public acceptance and utilization. The purpose of this case report was to exhibit the impact and consequences of low insertion torque on primary stability and clinical outcome of single tooth implant placed into fresh extraction socket in anterior maxilla having compromised bone. The result of this case report showed that low insertion torque can produce osseointegration along with primary stability with favorable survival rate and optimal marginal bone level in accepted norms in compromised bone condition.

S. No. 181

Implantology-Then and Now

Dr. Loveleen

PDM Dental College and Research Institute

Abstract

Implants have been one of the biggest advances in restoration of maxillofacial prosthetics as well as solution to tooth loss. This paper aims at summarizing current knowledge on implants, immediate loading versus conventional loading, short implants and custom implants using three-dimensional printing. Most of the implant surface modifications showed good osseointegration results. Immediate loading had similar clinical outcomes compared to conventional loading and can be used as a successful treatment because of the

advantage of reducing treatment times and providing early function and aesthetics. Short implants showed similar clinical outcomes compared to standard implants. A variety of sinus augmentation techniques, grafting materials, and alternative techniques, such as tilted implants, zygomatic implants, and short implants, can be used. With the development of new technologies in three-dimension and computer-aided design/computer-aided manufacturing (CAD/CAM) customized implants can be used as an alternative to conventional implant designs.

S. No. 182
Cylindrical versus Tapered Implant-Immediate/Delayed Placement-RCT

Dr. Sonu Kumar Suman

Institute of Dental Studies and Technology, Modinagar

Abstract

Implant geometry and design is one of the main features in implant success, concerning both body and the collar of an implant. There are two major design concepts viz cylindrical and tapered, they differ in the healing sequence after the implantation. Cylindrical implants with parallel wall tend to be less stable at implantation but gain stability rapidly, due to early formation of woven bone. On the other hand, Tapered implant generate an intimate contact between the osteotomy wall and implant surface and provide excellent stability. Numerous implant designs are available each one of which is advocated for improving bone to implant contact and reducing crestal bone resorption. So we decided to conduct a comparative study on 40 patients between cylindrical design implant and taper design implant in both delayed and immediate placement. The implants were clinically and radiographically assessed for success, complication and patient satisfaction at predetermined time intervals.

S. No. 183
Chin Graft Surgery: A Pre-requisite for Implants In Deficient Anterior Maxilla

Dr. Prashant Subhash Pawar

Bharati Vidyapeeth Dental College and Hospital, Pune

Abstract

Introduction

Bone grafting is a surgical procedure that replaces the missing bone with material from patients own body or an artificial substitute and restores the bony contour. After loss of teeth, alveolar ridge resorption is common, alters the size and shape of the ridge available for implant placement. The only solution to this lies in reestablishment of the height and width of the alveolar ridge by placing the bone grafts in order to achieve a consistent prosthetic design with a suitable load-bearing lamellar bone for implant placement.

Aims and Objectives

Material and Methods

Summary The bone graft material may be taken from your own body (autogenous), or it may be purchased from a human tissue bank (allograft) or an animal tissue bank (xenograft). In some instances, the bone graft material that is used may be synthetic (alloplast). Amongst

all the other various bone augmentation materials available, only autologous bone grafts has combined osteoconductive, osteoinductive and osteogenic features as and when compared to the other bone grafts. The mandibular symphysis region not only provide a greater graft volume but it also has other added advantages such as easy surgical access, low morbidity of the donor site and reduced surgical cost.

S. No. 184
Socket Shield versus Conventional Technique for Immediate Implant Placement in Anterior Maxilla: A Prospective Randomised Study

Dr. Madan Lal Verma

Pandit Bhagwat Dayal Sharma Postgraduate Institute of Dental Sciences, Rohtak

Abstract

Background

Deteriorative morphological changes in bone level and soft tissue contour after tooth extraction are inevitable. Due to these changes, an unfavorable bed is created for dental implants from the esthetic point of view. Common approaches suggested in literature to minimize these changes are conventional immediate implant, ridge preservation technique, and socket shield technique (SST). Among these, most implantologist are preferring immediate implant technique or SST. However, there are limited randomized control trials for comparison of these two techniques.

Aim

To compare SST with conventional technique (CT) for immediate implant placement in the anterior maxillary region.

Objectives

In both techniques:

1. To evaluate the implant survival.
2. To assess and compare the amount of bone loss.
3. To assess associated complications.

Method

After ethical clearance, based on inclusion criteria 24 patients were selected and divided into 2 groups by computer-generated randomization. In group A patients' implant placement was done by SST and in group B implant placement was done by CT. Primary outcomes assessed were probing depth, bleeding on probing (BOP), buccal width of keratinized mucosa (BWK), pink aesthetic score (PAS), radiographic evaluation, and any complication. The secondary outcomes assessed were surgery time and requirement of any additional bone graft during surgery. Along with initial baseline assessment follow-up at 1 month, 3 months, and 6 months were done.

Result

In both techniques no statistically significant difference was observed in terms of demographic variations. In clinical assessment of probing depth, BOP, and BWK, no statistically significant difference was noted. However, in terms of PAS and radiographic evaluation, SST has given better results.

Conclusion

A long-term multicentric study with a large sample size should be conducted to draw the superiority of one technique over the other.

S. No. 185**Comparative Evaluation of Efficacy of S-PRF and A-PRF in Soft and Hard Tissue Healing After Mandibular Third Molar Surgery Followed by Assessment of the Growth Factors and Bone Regeneration with Sticky Bone in Socket Preservation with Two Different Types of PRF in Bilateral Posterior Mandibular Teeth***Dr. Sayali Avinash Awate**Dr. D. Y. Patil Dental College and Hospital***Abstract**

Advance PRF (A-PRF) has got more number of growth factors resulting in better regeneration of soft and hard tissue, when compared with Standard-PRF (S-PRF). Sticky bone is a concept introduced by Sohn D. S. in year 2010. It is composed by mixing PRF with bone graft. It has now wide applications in implant dentistry. The sticky bone has unique property of adaptability to various defects and maintenance of the volume of augmentation till the healing period is over. The sticky bone enhances the healing, promote osteogenic potential and also controls the inflammation. This research study is completed in three phases. In first phase assessment of bone regeneration and soft tissue healing with the help of S-PRF and A-PRF. Second phase includes assessment of growth factors present in Standard PRF and Advance PRF. In third phase, assessment of the growth factors and bone regeneration with sticky bone in socket preservation with two different types of PRF is done. The A-PRF has greater distribution depth of neutrophilic granulocytes which makes it superior biomaterial for healing. PRF portion of sticky bone, when altered from S-PRF (standard PRF) to A-PRF (advanced PRF) the bone generating capacity of sticky bone is enhanced. Thus, sticky bone with A-PRF aids in faster and better bone and soft tissue regeneration as compared with sticky bone with S-PRF.

S. No. 186**Comparison of Traditional Implant Osteotomy Technique Verses Osseodensification Drilling Technique: A Prospective Cilinico-Radiological Study***Dr. Anindita Chakraborty**Regional Dental College, Guwahati***Abstract****Aim**

Study was conducted to compare implant primary stability, peri implant bone density and marginal bone loss among the implant placed using traditional osteotomy technique and osseodensification (OD) drilling technique with densah burs.

Materials and Methods

Total 14 implants were placed in 6 patients. In Group A, 7 implants were placed using traditional drilling technique, and in Group B, 7 implants were placed using OD drilling technique. Insertion torque was measured in both the groups intraoperatively using manual torque ratchet, while peri-implant bone density and crestal bone levels were measured at baseline (immediate post op), and 3-month post operatively with the help of CBCT.

Results

The primary stability in Group B was found to be higher than Group A with no statistical significance. Group B shows increased peri implant bone density compared to the other group. Marginal bone

height analysis shows significant difference in group A over 3 months; however, Group B shows no significant difference in marginal bone height in 3 months.

Conclusion

Within the limitations of this study following conclusions were drawn: OD increases bone mineral density in peri implant region which increases the insertion torque and primary stability which helps in establishing osseointegration and reduce the marginal bone loss.

S. No. 187**Socket Shielding versus Conventional Implant in Asthetic Zone***Dr. Zennathul Firthouse T.**Dr. B.R. Ambedkar Dental College***Abstract****Introduction**

A study was done to evaluate the marginal bone level, and the aesthetic outcome up of dental implants placed into a high esthetic zone by comparing 2 techniques of the socket shield technique and the conventional insertion technique.

Aims and Objectives

1. To evaluate the success rate of implant with or without socket shield technique.
2. Radiographically to evaluate the ridge width and normal healing in pre-op and post-op.
3. To prevent socket collapse.

Materials and Method

40 healthy partial edentulous subjects and age of 18–60 are included Conclusion study suggest that the socket shield technique is safe and provides better aesthetic results compared with the conventional post extractive technique. Order to assure high aesthetic results as well as extremely high long lasting implantology outcomes.

S. No. 188**All on 4 Technique in Maxilla Versus Mandible with Atrophic Posterior Bone***Dr. Tiwari Dharmendrakumar Rambihari**M.R. Ambedkar Dental College N Hospital***Abstract****Introduction**

Full mouth rehabilitation is becoming a necessity in recent times as people are more concerned about the esthetics and phonation even in old age. The aim of this study is to evaluate the outcome of all on 4 systems of dental implants in maxilla and mandible for full mouth rehabilitation cases.

Aim

To demonstrate the viability of all on four concept with immediate prosthesis placement as a good treatment option in complete atrophic edentulous arch.

Objectives

To evaluate the clinical performance of all on four concept implants with immediate placement of prosthesis in complete edentulous arch.

Materials and Methodology

A total of 10 cases. Patient included 20–60 years of age irrespective of gender having maxillary and mandibular completely or partially edentulous region were taken into the study and evaluated and followed up for 18 months.

Discussion

The study concluded that all on 4 implant system is a good treatment option for full mouth rehabilitation with better results in mandible compared to maxilla.

Result

The survival rate of implant was found to be 100% with mandibular implants having better results in crestal bone loss, probing pocket depth and implant stability compared to maxilla.

Conclusion

It can be concluded that when open reduction and internal fixation of condylar fracture is indicated rhytidectomy approach provides good access with low morbidity.

S. No. 189**The Study of Using Sinus Wall Graft in Reconstruction of Severely Resorbed Alveolar Ridge**

Dr. Manpreet Kaur Gill

M. R. Ambedkar Dental College and Hospital

Abstract**Aim and Objectives**

Aim of the present study is to evaluate the efficacy of lateral sinus wall graft augmentation in horizontally deficient ridge in bone formation for placement of dental implants.

The objectives are:

1. To evaluate the ridge clinically pre and post augmentation with sinus wall graft.
2. Radiographic evaluation of bone width pre and post 6 months after graft placement.
3. Evaluation of harvested area 6 months post-operatively for regeneration of bone.
4. Histological evaluation of bone in grafted area 6 months after graft placement.

Method

10 healthy patients with severely resorbed ridges formed the study group. Pre-operative radiographs to be taken for bone volume evaluation and treated with lateral sinus wall augmentation at the deficient ridge with help of screws and bone graft is sandwiched between the bone block and the ridge followed by closure. Ridge is evaluated 6 months post-operatively with CBCT followed by screws removal and implant placement.

Results

Radiographically, the length and width of the ridge was compared pre-operatively and 6-months post-operatively—satisfactory increment in bone dimensions were seen 6 months post-operatively for implant placement.

Conclusion

Radiographic and statistical observations showed that, the lateral sinus wall bone grafting technique served as a highly effective and reliable augmentation method for treatment of horizontal ridge defects.

S. No. 190**Evaluation of Short Implants in the Posterior Mandible**

Dr. K. S. Darshan

Ambedkar Dental College and Hospital

Abstract**Introduction**

Dental implants are considered a standard of care in treating edentulism. Tooth restorations using implant supported prosthesis for the functional and esthetic rehabilitation of patients have become an established and widely used treatment modality in modern dentistry.

Aims and Objectives

Evaluation of crestal bone radiographically pre-operatively and 6 months after loading and stability of the short implant.

Materials and Methods

30 patients, of age between 18 and 65 years, with edentulous spaces in posterior mandible, were selected. Implants were placed after obtaining an informed consent and CBCT scans. Prosthetic loading, following osseointegration was done after 3 months. Patients were recalled for follow up. OPG/IOPAR were taken to measure crestal bone loss at 1, 3 and 6 month interval, post loading.

Results

Mesial and distal vertical bone loss was measured and was found to be 0.02 mm and 0.01 mm respectively. The mean bone loss on the mesial is 1 mm and for distal is 1.03 mm, 6 months post-loading, determined radiographically. Soft tissue healing on both mesial and distal papillae was satisfactory.

Discussion

The use of short implants in the posterior regions reduces the need for bone augmentation procedures. Shorter implants offer several surgical advantages like less surgical risk of mandibular nerve paresthesia, with an overall reduction in surgical complexity.

Summary and Conclusion

Short implant-supported prostheses appear to be a valid option in the treatment of the atrophic jaw. High survival rates [88.9%] and low incidence of biological and biomechanical complications are reported after a mean follow-up period of 18 months.

S. No. 191**Versatility of Basal Implants in Rehabilitation of Compromised Maxillary and Mandibular Dental Arches**

Dr. Divya N. Kumar

Meenakshi Ammal Dental College and Hospital

Abstract**Introduction**

Basal implantology system is uniquely designed to utilize the basal cortical portion of the jawbones for retention. The purpose of this study is to assess the versatility of basal cortical implants in compromised dental arches.

Aims and Objectives

To assess the feasibility of basal implants in areas where there is reduced alveolar bone. To study the long-term stability of basal cortical implants in areas of compromised dental arches.

Material and Methods

This is a prospective clinical study done on 12 patients. Patients who had compromised alveolar bone or bone loss due to lesion or trauma

and in patients where other modalities of dental rehabilitation is not feasible, were selected. Ethical committee clearance was obtained.

Results

Basal implants aided in achieving stable dental arch rehabilitation with acceptable bone level margins around the implants.

Discussion

In cases where conventional or tooth supported dental rehabilitation is not feasible basal implants provide a better alternative.

Summary and Conclusion

Basal implants are a reliable option for treatment of patients, where there is insufficient alveolar bone levels and other modalities of dental rehabilitation are impractical.

References

1. Basal Osseointegrated Implants: Classification and Review, Aakarshan Daya Gupta, Aviral Verma, Tanay Dubey, Saloni Thakur, International Journal of Contemporary Medical Research ISSN (Online): 2393-915X; (Print): 2454-7379 | ICV: 77.83 | Volume 4 | Issue 11 | November 2017
2. Evaluation of immediate basal implants placement in maxillary premolar region, Shaymaa M. Wardal *BDS, Riham M. Eldibany2 PhD, Marwa G. Noureldin3PhD, Alexandria Dental Journal. Volume 45 Issue 2

S. No. 192

Immediate Functional Loading with Single Piece Implants

Dr. Sanjay Madhavan, Prof. Dr. Pradeep Christopher Jesudas

Thai Moogambigai Dental College and Hospital

Abstract

Introduction

Immediate functional loading of one-piece dental implants has become accepted treatment modality for fixed restorations. We evaluate the present protocol for immediate functional loading in extraction sites, segment reconstructions and single-tooth replacements (within maximum 3 yrs) with one-piece implants placed following methods as published by the implant foundation (IF).

Materials and methods

Here 30 patients received 56 immediately loaded one-piece Strategic Implant, supporting fixed metal-ceramic crown or splinted bridges. All implants were placed by one treatment provider, who delivered the prosthetics and controlled cases 6 months until now. The patients were asked to return for follow up examinations at 1st postoperative day, 3rd day, 2 week, 1st, 3rd and 6th month. Radiographic assessment of: the marginal bone level, integration of the load transmitting parts, healing of sockets, the reliability of possible target corticals, the survival of bent and unbent implants, the survival of implants in fresh extraction sockets and healed bone were determined with implants in function?

Results

No “peri-implantitis” was observed. Neither hypertension, diabetes, smoking nor bending of the implant’s neck had an influence on the success of the implants observed in this study. Basal screw implant showed a similar survival rate as compressive screw implants. Combination implants showed a significantly lower survival rate.

Discussion and Conclusion

Within the limits of this study, treatment with Strategic Implant® gives good results. The survival depends on immediately loading within maximum 3 days and the chosen target cortical (2nd/3rd

cortical) than anything else. Immediate functional loading using basal and compressive screw implants is a reliable option.

S. No. 193

Application of Basal Implants in Compromised Jaws

Dr. Ankita Dhirubhai Nakrani

Government Dental College and Hospital Ahmedabad

Abstract

Background

Rehabilitation of patients with bony defects of jaws can be challenging due to loss of hard and soft tissues, reduced vestibular sulcus and psychological status of the patient. Basal implants are specifically designed to gain anchorage from the basal cortical bone, which is exempt from resorption and remodelling. The purpose of this study was to assess the applications of basal implants in oral and maxillofacial rehabilitation of post traumatic alveolar defects, post resection defects and severely atrophic jaws.

Methods

313 BECES/BECES EX/KOC implants were placed in 40 patients, immediately loaded and observed for an average of 1.5 years. 38 were placed in extraction (E) sites and 275 were placed in edentulous (ES) sites. They were evaluated for bone loss, soft tissue shrinkage around the prosthesis, improvement in quality of life (QOL) and their survival after 1 year.

Results

304/313 (97.1%) implants survived while 9/313 (2.96%) failed at 1 year follow-up. Average bone loss at one year was 0.32 mm (E) and – 1.43 mm (ES). Average soft tissue shrinkage was 0.50 mm (E) and 1.43 mm (ES) and average patient’s global impression of change (PGIC) scale score was 6.36 (\pm 0.63) at 1 year. The complications observed were mobility {9 (2.8%)}, pain/discomfort {7 (2.23%)}, fracture of abutment at the neck {1 (0.3%)}, prosthesis loosening {8 (14.03%)} and requirement of relining {3 (5.26%)}. No periimplantitis was observed.

Conclusion

Basal cortical implants achieved satisfactory aesthetic and functional results along with the advantage of immediate functional loading. Hence we may conclude that basal cortical implants can play a pivotal role in rehabilitation of patients with compromised bone quantity and/or quality.

S. No. 194

Study of Sugar Cross Linked Collagen Membrane in Management of Peri-implant Defect Area

Dr. Ayesha Fatima

Al-Badar Rural Dental College and Hospital Gulbarga

Abstract

Background

Guided bone regeneration (GBR) evolved from the concept of guided tissue regeneration (GTR) and has been used for reconstructing sites with bone deficiencies associated with dental implants. A wide range of materials have been used in experimental and clinical studies to achieve GBR with varying amount of regeneration.

Objectives

To study the

- Efficacy of sugar cross linked collagen membrane.
- Ossification of membrane used for GBR.
- Bone formation in relation to buccal bone defect following GBR.
- Study the associated complications.

Method of Study

The pre-operative height, width and density of the residual ridge was measured using CBCT, and appropriate implant size was selected according to the measurement and placed subcrestally. The exposed defect area was covered with sugar cross linked collagen membrane.

Results

Amount of bone formed with vertical defect was 2.52 mm, horizontal defect was 3.08 mm and thickness of bone formed was 0.44 mm. There was complete absence of wound dehiscence, exposure of cover screw or implant, exposure of membrane, wound infection, inflammation and darkening of marginal gingival noted during the follow up period.

Conclusion

- It was concluded that Cross linked collagen membrane is an effective barrier membrane for GBR in buccal bone dehiscence defects with predictable bone formation.
- No evidence of membrane ossification.
- Cross-linked collagen membrane is highly biocompatible and stable during healing period.
- Implants remained stable.

S. No. 195**Efficiency of Implant Macrothread Design on Implant Primary Stability: A Comparative Study**

Dr. S. Vincy Flora

Rajas Dental College

Abstract**Aim**

Compare the influence of two different macro-thread designs on implant stability in the early postoperative period using RFA.

Materials and Methods

Study design: Comparative study. Age group: 30–50 years. Sample size: 12 patients. Site: Mandibular anterior (each patient will receive one active and one passive implant). n₁—third quadrant: (Active implants). n₂—fourth quadrant: (Passive Implants).

Results

On comparing the stability between active and passive threaded implants over the time period of 3 months, maximum stability was achieved in the active thread implants than passive threaded implants.

Discussion

Resonance frequency analysis has been used in the field of dental implantology since its introduction in 1996 Osstell is excited by magnetic pulses, and the resonance frequency is expressed electromagnetically as ISQ units and is calibrated on a scale of 1–100. Insertion torque is an often-cited quantitative measurement of primary stability, yet it only provides information about the implant at the time of installation. Good correlation between initial RFA values and the clinical classification of primary stability. It is important to keep in mind that other factors, such as implant design, drilling protocol, and precision of the osteotomy preparation, will play a significant role in whether or not this correlation is seen. Implant macro thread design

such as active and passive implants shows the highest variables. Active threaded implants have high thread pitch thereby increasing the osseointegration between the implant surface and bone than passive implants.

S. No. 196**Full Mouth Implant Supported Restoration in a Chronic Smoker**

Dr. M. S. Sahana

D.A.P.M.R.V. Dental College and Hospital

Abstract**Background and Introduction**

Edentulism is a devastating and irretrievable condition and is termed as the “Final marker of disease burden for oral health”. It can lead unswervingly to impairment, functional restraint, physical, psychological, and social disability. Patients have complained of excessive dissatisfaction due to conventional dentures due to pain, discomfort, poor stability, and hitches while eating as well as conceded retention capability. An answer for such conditions is the Implant supported fixed prosthesis. Additionally, Smoking has its impact on general in conjunction with oral health of an individual. As far as oral health is concerned, it significantly increases the danger of Peri-implantitis.

Aim

To highlight the success and survival of an Implant supported fixed restoration for a period of 1 year, in a 63-year-old male patient also a chronic smoker.

Result and Conclusion

Full mouth Implant supported restoration in the form of a “Malo’s Bridge” was fabricated and delivered to our patient. The concept of Malo’s bridge has great success rate and it eradicates requirement for bone grafting which is aggressive, expensive and uncomfortable for patient. The technique is also well endured and of lesser duration. Hence, the prosthetic rehabilitation of a totally edentulous and atrophic arch with implant-retained dentures includes comprehensive planning and must not only provide precise vertical height and maxillary-mandibular relationship but also should be aesthetically acceptable. Implant-supported overdentures is one of the treatment choices for restoration of completely edentulous jaws when conventional dentures have reduced retention due to progressive atrophy of the alveolar bone.

Reference

1. Leles C, Dias D, Nogueira T, McKenna G, Schimmel M, Jordão L. Impact of patient characteristics on edentulous subjects’ preferences for prosthodontic rehabilitation with implants. *Clinical Oral Implants Research*. 2019;30(3):285–292.

S. No. 197**The Relationship Between Serum Level of Vitamin D3 and Osseointegration Around the Dental Implant: A Review**

Dr. Nitin Bhagat

School of Dental Sciences, Sharda University, U.P.

Abstract

Vitamin D3 (VD3) is known for its role in bone improvement and support, along with role in calcium and phosphorus maintenance. A lower withinside the VD3 ranges closes in a markdown of its retention withinside the digestive organs and hypocalcemia. With this condition, homeostasis of calcium is an outcome of auxiliary hyperparathyroidism, as preparation of bone calcium will increment and calcium renal leeway diminishes. This integration must be preserved over time (Chrcanovic et al., 2018). The osseointegration of dental implants relies upon on surgical and prosthetic elements which includes the surgical procedure, time exceeded when you consider that implant placement, and kind of prosthetic loading (Suarez et al., 2013). In addition, it relies upon on implant-associated elements which includes the implant material, design (Jawad et al., 2017) and floor topography (Shibli et al., 2017) and affected person—associated elements consisting of the pleasant and amount of the host bone and the host response. The Endocrine Society pointers layout scopes of 26 (OH) VD3 are poor while under 21 ng/mL, insufficient while among 22 and 30 ng/mL and enough while over 32 ng/mL. Supplementation should be 50,000 IU consistently for a long time in occurrences of insufficiency in grown-ups (Holick et al., 2011). In conclusion, nutrition D3 appears to be powerful for dental implant osseointegration, despite the fact that similarly studies is needed on human models.

S. No. 198**Clinical Study of the Challenges and Complications with Dental Implant Surgery**

Dr. Prajakta Prasainjeet Wankhade

Dr. D.Y. Patil School of Dentistry, Navi Mumbai

Abstract**Introduction**

Implant treatment is considered as a safe technique with high rate of success. However, complications can follow dental implant surgery like other surgical procedure.

Aim

This study aims to analyse the complications faced during implant surgery.

Material and Methods

In this study 32 patients who underwent 110 implant placement between June 2019 and July 2021 were included. An assessment sheet was made which included following criteria: gender, age, type of implant placed, time of implant placement, grafting done or not, type of system used, comorbidity present, habits and type of complications. The data was collected, and statistical analysis was done.

Results

Out of 32 patients 17 were males and 15 were females. The average age was 48 years. Analysis of gender indicated that complications were seen mostly in female patients in age group of 45–55 years. The most common post operative complication was pain. Other complications reported were peri-implantitis, haemorrhage, damage to vital structure, component fracture, neurosensory disturbance, implant displacement into the mandibular canal, submandibular space, lingual space, maxillary sinus etc.

Discussion

Although serious complications are uncommon, dental implant placement is not free of complications. Therefore, careful analysis via imaging, precise surgical techniques and an understanding of the

anatomy of the surgical area are essential in preventing complications.

Conclusion

While dental implants are increasingly becoming the choice of replacement for missing teeth, the impediments associated with them are progressively emerging too. However, all the obstacles can be managed with good treatment planning along with precise surgical expertise which can give excellent results and a good outcome can be given to our patients with a better quality of life.

S. No. 199**Controversies in Dental Implant Treatment Planning for Anterior Maxillary Esthetic Zone: A Review**

Dr. V. Ashwin

PGIDS, Rohtak

Abstract

Dental implants have become an effective and preferred treatment modality for replacement of teeth in complete and partially edentulous jaw regions. Studies show ability of implant therapy to achieve aesthetic results of a desired level in the restoration of a missing or broken tooth with high predictability and on a long-term basis in the literature. However, literature show that there are limitations in some clinical situations where achieving a satisfactory outcome is still questionable on observing for a long-standing basis. As there is increasing expectations in the quality of treatment outcomes and there is continuous search of knowledge, giving birth to newer interventions to bring demands to reality, it has become a practise to perform newer techniques and modified protocols which lack adequate evidence in literature. Hence, it is crucial to justify the technique including the diagnosis, pre surgical planning and to make sure the principles of the procedure match the treatment goals with use of available evidence in the literature.

S. No. 200**Atraumatic Ridge Expansion for Implant Placement**

Prof. Dr. Kanubaddy Sridhar Reddy

Narayana Dental College

Abstract**Introduction**

Management of vertical and horizontal alveolar dimensional loss have different approaches including guided bone regeneration, block and particulate grafting, ridge splitting, distraction osteogenesis or composite micro vascular free flaps in larger defects. Recent advances led to use of expanders, which reduced surgical trauma providing more control over the expansion site and includes bone manipulation techniques where there is osteocondensation of vital bone which physically reshapes the bone to optimally receive a dental implant.

Methods

This was a prospective clinical study which was conducted in the department of oral and maxillofacial surgery on 20 consecutive patients who required bone expansion for implant placement and who met inclusion criteria were included in the study.

Results

The overall results of the study demonstrate a good survival rate of 100% at 3 months postoperative period with all the 10 implants placed in the partially edentulous regions of the jaw after preparation of implant site using bone spreaders and were successfully Osseo integrated with an overall minimal or no soft tissue changes. In the study a mean bone width gain was 1.55 ± 0.79 mm with corresponding $p = 0.058$ for radiographic assessment, which was statistically significant.

Conclusion

Bone expansion technique in conjunction with simultaneous placement of implants can be used in patients where there is insufficient bone thickness. This is an alternative to block grafting in select cases to increase ridge width, where bone-grafting techniques require a longer treatment time.

Category: Dental Implantology, Pre-implant Surgery and Grafting

S. No. 1

Efficiency of Implant Macrothread Design on Implant Primary Stability: A Comparative Study

Dr. S. Vincy Flora

Rajas Dental College

Abstract

The aim of the study is to compare the influence of two different macro-thread designs on implant stability in the early postoperative period using RFA. The comparative study includes 13 patients within 30–50 years of age requiring implants in mandibular anterior and each patient received active implants in third quadrant and passive in the fourth quadrant. Resonance frequency analysis has been used in the field of dental implantology since its introduction in 1996 Osstell is excited by magnetic pulses, and the resonance frequency is expressed electromagnetically as ISQ units and is calibrated on a scale of 1–100. Insertion torque is an often-cited quantitative measurement of primary stability, yet it only provides information about the implant at the time of installation. Good correlation between initial RFA values and the clinical classification of primary stability. It is important to keep in mind that other factors, such as implant design, drilling protocol, and precision of the osteotomy preparation, will play a significant role in whether or not this correlation is seen. Implant macro thread design such as active and passive implants shows the highest variables. Active threaded implants have high thread pitch thereby increasing the osseointegration between the implant surface and bone than passive implants. On comparing the stability between active and passive threaded implants over the time period of 3 months, maximum stability was achieved in the active thread implants than passive threaded implants.

S. No. 2

Rehabilitation of Mucormycosis Survivors: An Enigma

Dr. Pooja Yadav

SGT University

Abstract

Fungal infections, including Mucormycosis, aspergillosis and invasive candidiasis, have been extensively reported in patients with severe covid-19 or those recovering from the disease and have been associated with severe morbidity and mortality. India has reported a recent surge in Mucormycosis cases. In the year 2020, maxillofacial surgeons pan India came across this wave of Mucormycosis cases where treatment necessitated invasive surgeries like hemi-maxillectomy or complete maxillectomies. The quality of life of such patients suffers negatively and a literature search for the same showed decreased curve since then. Post surgery, dental rehabilitation of such cases is a challenge to maxillofacial surgeons and prosthodontists. Zygomatic implants in such cases can be a great tool to boost the depleting quality of life. Branemark (1988) first introduced the zygoma implant not only as a solution to obtain posterior maxillary anchorage but also to expedite the rehabilitation process. Zygomatic implant has been an effective option in the management of the atrophic edentulous maxilla as well as for maxillectomy defects. Earlier zygomatic implants were done under general anesthesia but in the recent years, surgeons have started doing it under local anesthesia as well, thus avoiding any psychological distress of going under general anesthesia. Zygomatic implants have proven to be effective and safe option to restore the dentition. This paper reviews the indications for zygoma implants and the surgical and also reports on the clinical outcome of the zygomatic anatomy guided approach.

Is Amphotericin-B Required for Management of Post Covid Mucormycosis?

Dr. Priyanka H. Taneja

ACPM Dental College

Abstract

2nd wave of Covid-19 manifested increased incidence of Mucormycosis. India contributed to approximately 71% of the global cases of Mucormycosis in patients with COVID-19 based on published literature from December, 2019, to the start of April, 2021. Management protocol followed was combination of surgical debridement and antifungal therapy with Inj Amphotericin-B. Our study was done to find out if Inj Amphotericin-B was required for management of Covid Mucormycosis. The aim of the study is to assess the requirement of Inj. Amphotericin-B in cases of Post Covid Mucormycosis.

Study Design: Retrospective Observational Study.

Sample Size: 50 patients.

Selection Criteria: Patients who presented with signs and symptoms of Mucormycosis Post Covid-19 infection.

Data Collection: History and Clinical examination, radiographs and histopathological and microbiological reports.

Statistical analysis was done using IBM SPSS Software. Patient's recovery rate was more than 90% with less complications without use of Inj. Amphotericin-B and with only complete surgical debridement. Irrational use of Inj. Amphotericin-B lead to scarcity of drug and great financial burden on patients. Prompt Diagnosis and Thorough Surgical Debridement is required for management of Post Covid Mucormycosis with correction of underlying systematic conditions like uncontrolled DM and deranged coagulation profile. 6 months–1 year follow-up of patients showed complete healing without spread or recurrence of disease.

Covid Associated Rhino-Orbitomaxillary Mucormycosis: Management and Outcomes From a Tertiary Care Centre

Dr. B. Vasantha Dhara

Manipal College of Dental Sciences, Manipal

Abstract

Introduction

COVID-19-associated rhino-orbital-maxillary Mucormycosis had reached an endemic state during India's second wave of COVID-19, burdening the healthcare infrastructure and leading to patient morbidity and mortality. This study discusses the clinical presentation, contributing factors, medical and surgical management, and outcome of patients with (COVID-19)-associated rhino-maxillary Mucormycosis, from records, treated at a tertiary care centre.

Method

This retrospective observational study analysed patients diagnosed with rhino-orbital Mucormycosis involving maxillary/palatal bones. Across all disease stages, cumulative 60-day disease-specific survival and overall 60-day survival were studied. Surgical complications and outcomes were also noted.

Results

26 patients were diagnosed with rhinomaxillary Mucormycosis. All of them had a positive covid history with either the use of steroids or oxygen supplementation. 23 patients were previously known diabetics. Endoscopic sinus surgery involved middle meatal antrostomy with debridement of the maxillary sinus, sphenoidal sinus, ethmoidal sinus, frontal sinus, pterygopalatine fossa, orbital decompression or exenteration when deemed necessary. Total or infrastructure or hemi or subtotal maxillectomy or alveolectomy were undertaken after clinical and radiological evaluation. 24 patients survived. 2 patients reported after day 54 and day 49, requiring revision surgeries.

Conclusion

The patients with maxillary bone involvement have a good chance at recovery with acceptable functional long term results with limited rehabilitation options. Early identification, proper multidisciplinary team management with systemic antifungals, judicious surgical debridement, and control of comorbidities lead to desirable outcomes in rhino-maxillary COVID-associated Mucormycosis.

A Case of Mucormycosis Involving Upper Jaw in Post Covid Patient

Dr. Yellanur Raghavendra Reddy

G. Pulla Reddy Dental College and Hospital, Kurnool

Abstract

A 65 years old male patient came to our unit with fungal necrosis of right upper jaw since two months. Gives history of covid 5 months ago. He is known diabetic. Patient underwent hemi maxillectomy with obturator placement. Post operatively antifungal treatment given for period of 6 months.

Mucormycosis: Blocking the Black Fungus

Dr. Nirmala Mrugesh Devar

Karpaga Vinayaga Institute of Dental Sciences and Medical Centre

Abstract

Mucormycosis is a rapidly progressing fungal infection caused by filamentous fungi in the Mucoraceae family and is frequently seen in diabetic and immunocompromised patients. Mucormycosis is categorized as rhino cerebral, pulmonary, cutaneous, gastrointestinal or disseminated, depending on organ involvement; the most common form is rhinocerebral (39%). In this case report we present the clinical finding and therapeutic outcome of rhino-orbital Mucormycosis. Histopathological examination of the hard palate, nasopharynx or sinus biopsy revealed typical Mucor hyphae. Visual acuity was no light perception in patients with severe orbital involvement therefore patient planned for orbital exenteration. This study involve rapid diagnosis and treatment are important for the survival of rhino-orbital Mucormycosis patients. With orbital involvement, surgical debridement and systemic and local treatment with antifungal agents morbidity can be reduced.

Post Covid Menace of Mucormycosis in Maxillofacial Region

Dr. Shelly Sharma

Subharti Dental College, Meerut

Abstract

Background

Mucormycosis is a rare, fulminant, rapidly spreading infection, which usually affects patients with underlying immune deficiency. An exponentially worsened problem during the current pandemic, and also called 'black fungus', Mucormycosis commonly causes necrosis in the head and neck region including nose, paranasal sinuses, orbits and facial bones with possible intracranial spread. Early symptoms of the disease include facial cellulitis, periorbital edema and nasal inflammation followed by widespread tissue necrosis. Failure of prompt medical and surgical intervention may lead to cerebral spread, cavernous sinus thrombosis, septicemia and multiple organ failure leading to high morbidity and mortality.

Objective

COVID 19 infection, its treatment, resultant immunosuppression and pre-existing comorbidities have made patients vulnerable to secondary infection including Mucormycosis. It is important to understand the presentation, risk factors and outcomes to undertake measures for prevention and treatment.

Method

We conducted a retrospective interventional study on two patients with history of COVID-19, who developed Mucormycosis and were managed at Subharti Dental College and hospital, Meerut. Diagnosis of Mucormycosis was based on clinical features, culture and biopsy.

Result

One patient was male and other was female, aged between 35 and 40 years. Both patients had received corticosteroids for the treatment of COVID 19. Both the patients were successfully managed with Intravenous Liposomal Amphoterecin B with Posaconazole and surgical debridement of necrotic tissue. In the last follow up both the patients were living a disease-free life and had received prosthetic rehabilitation for the deformity.

Conclusion

Mucormycosis is an aggressive and potentially fatal disease in immunosuppressed patients. Careful clinical, radiographical examination along with histopathological confirmation are the key to early diagnosis of Mucormycosis leading to correct and prompt treatment.

Reference

1. Auluck A. Maxillary necrosis by mucormycosis. A case report and literature review. 2007;12:E360–4.

Local Administration of Amphotericin B: A Novel Approach to Manage Invasive Rhinomaxillary Mucormycosis

Dr. Neha Jajodia

PGI Rohtak

Abstract**Background**

In the wake of the second wave of Covid 19 disease, head and neck surgeons in India saw an unprecedented number of patients with the presentation of mild and severe forms of Covid associated Mucormycosis. The management of this disfiguring serious disease was accompanied with a myriad of problems such as an already overburdened health care system, paucity and high costs of the therapeutic antifungal medication Amphotericin b, no fixed surgical guidelines for management and need for multidisciplinary management between physicians and surgeons with overlapping domains like otorhinolaryngology, maxillofacial and oculoplastic surgery.

Aim/Objective

This paper aimed to present the idea of a novel technique incorporating local injections of amphotericin b in the management of invasive rhino-maxillary-orbital mucormycosis so as to reduce the need for aggressive radical maxillofacial surgery and its associated morbidity.

Material and Methods

Patients were recruited from the Mucormycosis clinics at the post-graduate institute of medical sciences, Rohtak showing clinical, radiographic, histologic evidence of mucormycosis. These were patients presenting with Covid associated mucormycosis, who were either deemed medically unfit to receive the nephrotoxic amphotericin b injections, had already completed the maximum dosage and undergone endoscopic surgery but still had signs of disease, or for whom the drug was unavailable due to drug paucity in the wake of increased drug demand. Local injections of prepared Amphotericin B were administered off label in and around the local lesions in the oral cavity, exact location depending on specific presentation.

Result

The cases showed significant regression of local disease such as gingival abscess, palatal oedema, teeth mobility with marked clinical improvement. No systemic side effects were noted. The need for aggressive surgeries such as maxillectomy could be avoided with local disease control.

Conclusion

Local Amphotericin B administration could be considered as an adjunct in management of mucormycosis.

Rhino-Orbital-Cerebral Mucormycosis (ROCM) and Its Management: Maxillofacial Surgeon's Perspective

Dr. Srinivas Gadipelly

Kamineni Institute of Dental Sciences, Nalgonda

Abstract

Aim of this paper is to present management of COVID-19 associated ROCM involving multidisciplinary approach consisting of maxillofacial surgeon, ENT surgeon, ophthalmic surgeon during COVID-19 pandemic at our hospital. In the backdrop of COVID-19 expression, there has been a notable rise in the incidence of invasive fungal infections of the maxillofacial region, namely mucormycosis and aspergillosis. The most common type of mucormycosis is the rhino-cerebral-orbital type which happens when spores are inhaled into the paranasal sinuses of susceptible hosts. Several risk factors being implicated in pathogenesis, like diabetes, neutropenia, excessive use of steroids, unhygienic practices, prolonged hospital stay, with possibility of nosocomial infection. Patients presents with headache, fever, severe pain in the upper jaw, mobile teeth, pustules with discharge of pus, and necrotic exposed maxilla or palatine bones. Contrast enhanced MRI, and CT are the imaging modalities of choice. Diagnostic nasal endoscopy allows a quick inspection and sampling from the nasal cavity. The surgical intervention varied from a simple surgical debridement to maxillectomy which may be unilateral or bilateral, and extended involving adjacent bones. Patient underwent also simultaneous nasoendoscopy for clearance of fungus from the paranasal sinuses and orbital extenteration in some of the cases by ENT and ophthalmic surgeon respectively. Patients were managed with liposomal amphotericin which was instituted at 3–5 mg/kg and dosage tailored to the patient renal tolerance. Excised portion reconstructed with basal implants supported dentures, or obturators after 6 months.

Category: Head and Neck Oncology**Risk Stratification of Surgical Site Infection in Oral Onco-Surgery and Preoperative Oral Swab Culture Based Antibiotic Prophylaxis: Our Institutional Experience**

Dr. Rashmi Singh

Balco Medical Centre, Atal Nagar, Raipur Chattishgarh

Abstract

SSI (surgical site infection) is one of the most frequent postoperative complications of oral cancer surgery, which causes detrimental effect in overall management and outcome.

Aim

To study the risk factors for SSI in Head and neck cancer patients who were treated with curative intent and implement its finding in suggesting intervention. It also evaluated the efficacy of preoperative oral swab culture based antibiotic prophylaxis.

Method

A study was done on 424 patients of oral cancer at our institute—from July 2019 to June 2020. It was done in two phase. Patients were subjected to prophylactic antimicrobial agents based on the institutional antibiotic policy in preintervention phase. SSI and various risk factors were recorded. Based on the results of first phase, intervention

was planned. In intervention phase, Preoperative oral swabs were collected for average 80–85% cases along with frequent mouth wash with Chlorhexidine. In 54% cases, there was predominant growth of *Pseudomonas aeruginosa*. *P. aeruginosa* is resistant to Cefuroxime and metronidazole. Hence surgical prophylaxis was changed to *Cefoperazone sulbactam* in these cases. SSI rate in pre intervention phase were compared with post intervention phase.

Result

We found the preoperative culture based antibiotic caused drastic reduction in SSI rate from average 17.21% in preintervention period to 4% in post intervention period.

Conclusion

We propose guided surgical prophylaxis for Head and neck surgeries along with risk assessment to reduce risk of SSI in immediate post-operative period.

Keywords SSI, Preoperative oral swab, Antibiotic prophylaxis, Oral cancer.

Reference

1. Cunha TF, Melancia TA, Ribeiro CM, et al. Risk factors for surgical site infection in cervico-facial oncological surgery. *J Craniomaxillofac Surg*2012;40:443–8.

S. No. 71

Intra-Parotid Facial Nerve Schwannoma: A Diagnostic Dilemma and Its Current Management Perspectives

Dr. Akhilesh Kumar Singh, Prof. Dr. Naresh Kumar Sharma

Banaras Hindu University

Abstract

Schwannoma is an ectodermal benign encapsulated tumor arising from the Schwann cells. Most of the facial nerve schwannomas usually arises in the infra-temporal portion but 9% of cases are located extracranially. Intra-parotid facial nerve schwannomas are rare entity which present as an asymptomatic swelling similar to any other benign tumour. Although most patients with intra-parotid schwannomas do not present with facial nerve palsy. Hence, pre-operative diagnosis is difficult to establish in these cases. Intraoperative frozen section is the modality of choice for its confirmation. We present a case of 50 years old male patient with asymptomatic parotid swelling and normal facial nerve function. Preoperative FNAC was suggestive of pleomorphic adenoma. Post-operative Histopathologic study was conclusive of schwannoma which was surprising. Postoperative Facial nerve paresis is common in underdiagnosed cases, which is a common complication of IFNS. Various treatment modalities have been practiced in the past. In this paper, we will discuss the review of literature along with current trends in its management.

S. No. 72

Role of Compartment Resection of ITF, for Malignant Tumors: A Surgical Result in Single Academy

Dr. Atish Kundu

Rama Dental College Hospital and Research Centre

Abstract

Locally advanced oral cancers are a challenge to head and neck surgeons, particularly when they extend into infratemporal fossa (ITF). These cancers are staged as T4b based on American Joint Committee on Cancer (AJCC) classification. The local recurrence rate is very high due to poor understanding of the extent of tumor spread in masticator space and technically difficult surgical clearance. Complete surgical excision with histologic negative margins of resection is an important determinant of survival and local control.

Aim and Objectives

To document the loco regional control and morbidity in patients undergoing compartment resection for locally advanced oral cancer extending to infratemporal fossa.

Material and Methods

Data of 80 patients who underwent ITF clearance for a very advanced oral cancers was collected between 2016 August 2016 to December 2019 and the outcome was recorded for the same.

Discussion

Anterior CFR has remained the gold standard for the management of tumors involving the ITF. After a mean follow-up of 19 months, 45 patients (62.5%) were alive and disease free. In our study, 16 patients (22.2%) had local recurrence in the ITF within 19 months after resection. The addition of postoperative radiation with or without chemotherapy has shown a favorable effect on treatment results of the advanced malignancies of the infratemporal fossa. CFR is a useful method to achieve the objective of a safe and radical resection when they were properly applied.

Summary and Conclusion

Considering the higher local control rate and low mortality rate, CFR With adjuvant radiotherapy is a gold standard treatment option for malignant tumours involving anterior skull base.

S. No. 73

Preservation of Head of the Condyle in (hemi) Mandibulectomies: A Clinical Study

Prof Dr. Kishore Kumar R. V.

Narayan Dental College and Hospital, Nellore

Abstract

Aim

To determine the advantages of preserving the head of the condyle in hemi-mandibulectomies with the objectives of evaluating the changes in the 1. Amount of bleeding-(reduced/increased) from pterygoid venous plexus, maxillary artery and adjacent soft tissue. 2. Operating time (general anesthesia time) 3. Amount of trauma to the tissues around the head of the condyle/TMJ/glenoid fossa, capsule of TMJ etc. 4. Postoperatively changes in quantity of discharge in neck drains (early removal of drains).

Materials and Methods

The study was done from Jan 2017 to Jan 2021 and a total of 40 patients were included in the study and divided into two groups. The study group is group A (preservation of condyle), the control group is group B (where condyle was removed). 14 male and 7 female in group A and 11 male and 9 female in group were included. Patients with carcinoma of lower alveolus of mandible not involving the cheek and upper GB sulcus, RMT were included. All patients underwent the surgeries by same surgeon in the same clinical setting in the same hospital.

Results and Conclusions

by preserving the head of the condyle the amount of bleeding can be reduced, the operating time can be reduced by 30–40 min and thus saving GA time and drugs and its effects, charring of the TMJ area can be reduced (may be helpful in good healing of tissues since surgical insult to the tissues is reduced) post operative discharge/collections in drains decreases leading to early removal of drains. All the above findings were observed in our cases. So preserving the head of the condyle if at all possible is a good option during hemi-mandibulectomies.

S. No. 74**Rare Malignant Neoplasms in Oral and Maxillofacial Surgery: A Case Series**

Dr. Tanmay Ghorui

Guru Nanak institute of Dental Sciences and Medicine

Abstract**Background**

Oral cavity exhibits a diverse collection of malignant lesions that can be challenging due to the variety of structures from which they can arise. Thus, the diagnostic and therapeutic decisions related to those lesions are more difficult. These heterogeneous group of lesions include those of neural, fibroblastic, myofibroblastic, myogenic and epithelial tumours. This paper deals a case series of nine different neoplasms affecting the oral cavity which include rhabdomyosarcoma, leiomyosarcoma, astrocytoma, spindle cell sarcoma, malignant melanoma, metastatic renal cell carcinoma, Eccrine Acrospiroma. All of those cases were diagnosed and treated in the department of oral and maxillofacial surgery, GNIDSR.

Objectives

Most of the lesions exhibit a histologic overlap that make the diagnosis very difficult. There is a diagnostic dilemma as these rare neoplasms mimic oral squamous cell carcinoma, which is the most common malignant epithelial neoplasm affecting the oral cavity. They demand exhaustive investigations for proper diagnosis due to their potentially aggressive nature, unpredictable biological behaviour. They have tendency to recur and metastasize providing a very poor prognosis.

Methods

Surgical intervention, radiation therapy and chemotherapy alone or in combination are the prime goal to achieve disease free survival.

Findings and Conclusions

It is fairly challenging to diagnose through routine histopathology and requires judicious use of immune stains which aid in reigning out specific neoplasms. Early diagnosis is the key for improved outcome and disease-free survival.

References

1. Jatin shah's head and neck surgery and oncology 4th edition.
2. Klein MJ, Siegal GP. Osteosarcoma. American Journal of Clinical Pathology. 2006;125(4):555–81.

S. No. 75**Quality of Life (QoL) Among Oral Cancer Patients Treated with Selective Neck Dissection: A Cross-Sectional Survey**

Dr. G. R. Karthikeyan

Karpaga Vinayaga Institute of Dental Sciences

Abstract**Introduction**

There is no doubt about the oncologic effectiveness of neck dissections (ND). But the quality of life of patients with oral cancer and the morbidity associated with ND like shoulder dysfunction remains uncertain. The present study was aimed to assess the postoperative neck dissection related quality of life for oral cancer patients who underwent selective neck dissection.

Materials and Methods

A cross-sectional survey had been conducted by using a self-administered, neck dissection related QoL questionnaire in 128 patients who had undergone only selective neck dissection (SND—up to Level IV) for oral cancer.

Results

Out of 128 patients, 73.8% of patients had better QoL, 26.2% of patients had worse QoL. It was found to be statistically significant ($P = 0.000$).

Conclusion

SND, being a more conservative approach sparing the spinal accessory nerve could still limit the quality of life to a certain extent.

S. No. 76**The Guardian Angel**

Dr. V. Deepak

Karpaga Vinayaga Institute of Dental Sciences

Abstract

The pectoralis major myocutaneous (PMMC) flap has been used as a versatile and reliable flap since its first description by Ariyan in 1979. In India head and neck cancer patients usually present in the advanced stage making PMMC flap a viable option for reconstruction. Although free flap using microvascular technique is the standard of care, its use is limited by the availability of expertise and resources in developing world. Like any other free flap pedicled flap can go for necrosis by various reasons. This scenario is a nightmare when no other free flaps can replace the failed PMMC flap. 'The Guardian Angel' in this condition is latissimus dorsi flap. The tissue transfer of the latissimus dorsi flap may be indicated for the restoration of intra- and extraoral defects, especially when a large sized skin island flap is required. In many cases, use of the latissimus dorsi flap for coverage of large-sized intraoral defects results in bulkiness due to the proportion of subcutaneous fat. Though it has limitations this flap can be widely used as an alternative for PMMC flap for large sized defects. In this study, we present two cases of LD flap in failed PMMC flap. In one case there was kinking of vascular pedicle and in other case due to recurrent infection. In both the cases the LD flap took up well and was well accepted by both the patients without any complications.

S. No. 77**Outcome of Compartmental Resection of Locally Advanced Oral Cancers Extending to Infra-temporal Fossa***Dr. Sardar Singh Yadav, Dr. Mukherji Srijon**Rama Dental College, Kanpur***Abstract****Background**

Infratemporal fossa is a complex area located at the base of the skull, deep to the masseter muscle, closely associated with temporal and pterygopalatine fossae.

Aim

In our study, extension of disease into lateral pterygoid had a worse outcome compared to infra-notch tumors.

Method

Study was performed on 20 patients operated for locally advanced oral squamous cell carcinoma extending to infratemporal fossa and staged T4b according to 2018 AJCC classification (8th edition), between April 2019 to May 2020 with minimum follow up of 1 year. All patients had involvement of muscles of mastication and were evaluated clinically as well as by contrast enhanced CT scan.

Results

This study was done in 20 patients in which all patients underwent reconstruction (14 with Pectoralis major myocutaneous flap, 1 with forehead flap and PMMC flap, 1 with radial forearm flap and with rotational tongue flap). All patients received post-operative adjuvant treatment except one who refused radiotherapy.

Conclusion

Patients with disease inferior to lateral pterygoid muscle or disease involving anterior half of masticator compartment have a reasonably good outcome with loco regional control in about 60% patients after compartment resection of ITF and aggressive adjuvant treatment. Reconstruction by microvascular free flaps reduces morbidity and improves function compared to bulky PMMC flap. Close margins of resection in the muscles of mastication, multiple metastatic lymph nodes, and extra-nodal spread carry poor prognosis. Compartment resection of ITF may be curative in selected patients with T4b oral cancers who were only treated with palliative intent in the past.

S. No. 78**Temporalis Muscle Flap in Reconstruction of Maxillectomy Defects***Dr. Lavanya S.**Dr. Syamala Reddy Dental College Hospital and Research Centre***Abstract**

The temporalis muscle flap is robust, versatile and reliable. We studied 17 patients who underwent temporalis flap reconstruction after maxillectomy defects following tumour resection. There were 11 cases of Squamous cell carcinoma, 3 cases of sarcoma and 3 cases with mucoepidermoid carcinoma. There were 15 inferior partial maxillectomies and two subtotal maxillectomies. On follow up most patients had good epithelialization and resumed to normal diet in 2 weeks post-surgery. Two patients had hyper nasal speech. Severe trismus was present in 2 patients. Aesthetic and functional

expectations were met in most of our patients. There were no major complications, injury to branches of facial nerve. One flap failure occurred with wound dehiscence. Temporalis flap can be used for immediate reconstruction following maxillectomy. It is a solid straightforward technique that can be performed by a single surgical team and also has short operating hours and cost effectiveness compared to microvascular free flaps while providing high rate of functional and aesthetic outcomes.

S. No. 79**Use of Masseter Muscle Flap for Reconstruction of Hemi-Mandibulectomy Defects in Oral Cancer***Dr. Mohit B. Shankar, Dr. Manish Kumar Singh**Rajarajeshwari Dental College and Hospital***Abstract****Introduction**

The most popular method for management of oral cancer defects is nowadays represented by use of microvascular flaps for optimal restoration of form and function. However, not every defect strictly requires a free flap and not every patient is an optimal candidate for a microvascular procedure. Therefore, alternative pedicled flaps have an important role even in free flap era, especially in tertiary cancer centers where time consuming microvascular surgeries are less feasible.

Objective

This study was done to evaluate the efficacy of masseter muscle flap in reconstruction of hemi mandibulectomy defects in oral cancer.

Materials and Methods

A masseter muscle flap was used to reconstruct the postsurgical intraoral hemi-mandibulectomy defects in 30 patients with squamous cell carcinoma of oral cavity. The patients were followed up at 1 week and 1 month postoperatively to check for flap viability, complications, changes in mouth opening and deviation of mandible on mouth opening.

Results

The flap was viable in all patients and underwent mucosalization. 4/30 patients had postoperative infections, while 1/30 patients developed an oro-cutaneous fistula, 5/30 patients developed communication between oral cavity and neck, mouth opening was recorded less than 20 mm for 5/30 patients, 20–25 mm for 8/30 patients, 25–30 mm for 13/30 patients, more than 30 mm for 4/30 patients. The ipsilateral deviation of the mandible on mouth opening was between 0 and 5 mm in 10/30 patients, 5–10 mm in 12/30 patients and more than 10 mm in 8/30 patients.

Conclusion

The study infers that masseter muscle flap is a reliable method for reconstruction of hemi-mandibulectomy patients yielding good functional results and acceptable cosmesis with minimal postoperative complications.

S. No. 80**Role of Salvage Surgery in Head and Neck Cancer***Dr. Beena Sivakumar**Meenakshi Ammal Dental College and Hospital*

Abstract

Salvage surgery refers to the surgical treatment after failure of initial treatment in various scenarios including treatment of delayed neck metastasis, recurrent primary tumours. It primarily indicates surgical management after lack of response from primary tumour post-radiotherapy or CTRT. Chemo-radiotherapy is emerging as the gold standard in patients having advanced squamous cell carcinoma in head and neck (SCCHN) as 50% of advanced stage cancer relapses after primary non-surgical treatment. In such patients, role of salvage surgery is considered as treatment modality for patients having recurrent resectable head and neck squamous cell carcinoma. Wide local excision to achieve clear margins should be balanced combined with functional consequences of organ mutilation, morbidity and likelihood of success of the surgery. Patient selection for this surgery is a critical factor. It is absolutely necessary to select the best candidate for salvage surgery based on functional and oncologic outcomes. In this paper, we have highlighted the role of salvage surgery in a patient with recurrent SCCHN and literature review.

S. No. 81**Various Techniques, Designs and Reconstructive Options of Pectoralis Major Flap in Head and Neck Oncology**

Prof. Dr. Yadav Anurag

Institute of Dental Sciences, U.P.

Abstract

Pectoralis major flap has been the work horse for the reconstructive surgeries in various oncological and non-oncology procedures of head and neck. Different variations have been explained by various authors from time to time. This paper collectively highlights the cases done via variations in design of the pectoralis major flap which were used on various anatomic defects post oncological resections.

S. No. 82**The Role of Naso-labial Flap in Oro-facial Reconstruction**

Dr. Divya Archana

Teerthankar Mahaveer Dental College and Research Centre

Abstract

Nasolabial flap is a very reliable and versatile local flap in the head and neck. With robust and reliable vascularity this flap can be raised with minimum time, the flap can be superiorly/inferiorly based to reconstruct minor defects of the extraoral and intraoral region such as dorsum of the nose, alae, columella and the lower eye lid, upper lip, anterior floor of the mouth, alveolus and the lower lip. The ease of surgery, probability of carrying out the procedures under local anesthesia in co-morbid patients and inconspicuous scar are some of the advantages of this flap. A series of cases of nasolabial flap reconstruction in Dept. of Oral and Maxillofacial Surgery, Teerthankar Mahaveer Dental College and Research Centre, were included in the study. Surgical information including defect location, size of defect and time of harvest and success of surgery were noted. The use of Nasolabial flap to reconstruct orofacial soft tissue defects is at least a century old method for reconstruction in the literature as a two stage procedure. Here, the emphasis is made on single stage procedure

avoiding second surgical intervention. Despite widespread use of this invaluable flap, there are still controversies over the concepts in naming this flap as myomucosal or FAMM flap.

Oral Sub Mucous Fibrosis Surgical Management: A Review

Dr. Om Prakash

Dental Institute, RIMS, Ranchi

Abstract

Oral submucous fibrosis (OSMF) is a chronic, insidious, progressive, debilitating, scarring, irreversible, complex and crippling disorder of the oral cavity. OSMF is predominantly seen in people of South and Southeast Asia, India, Bangladesh, Sri Lanka, Pakistan, Taiwan, Southern China, etc., where chewing of betel quid, areca nut or its flavored formulations is frequently practiced. The rapid increase in the prevalence of this disease is due to an upsurge in the popularity of commercially available areca nut and tobacco preparations—gutkha, pan masala, flavored areca nut, mawa, etc., in Asian countries. It causes significant morbidity, in terms of loss of mouth function as tissues become rigid and mouth opening becomes difficult, and mortality because of transformation into squamous cell carcinoma. There is no consensus on the most appropriate management of OSMF. Many treatment protocols for OSMF have been proposed by various researchers since its first diagnosis to alleviate the signs and symptoms of the disease and stop the disease progression and malignant transformation. In continuation to the surgical treatment of OSMF Mehrotra et al. (2009) mentioned that buccal fat pad served as the best substitute because it provided excellent function without deteriorating the esthetics. It offered ease of surgery, could be very easily performed under local anesthesia as a day care procedure, and had little postoperative morbidity and good patient acceptance. This paper is humble attempt to present the surgical technique used to treat OSMF.

Nasolabial Flap in the Management of Oral Submucous Fibrosis: A Case Report

Dr. Chaitanya Swetha

Government Dental College and Hospital

Abstract

Oral submucous fibrosis is a premalignant condition in which patient suffers from limited mouth opening and fibrous bands over buccal mucosa. Various medical and surgical modalities are suggested for the management of osmf. Surgical treatment is usually indicated in late and irreversible stages of the disease. The surgical modality implemented includes fibrotomy, coronoidectomy and reconstruction at recipient site with bilateral nasolabial flaps. The nasolabial flap is an arterialised local flap with an axial blood supply and is used in the management of advanced cases of osmf. The flap is reliable, economical, accessible with close proximity to the defect and is used in the reconstruction of various intra and extra oral defects. The complications include post operative extraoral scar, loss of nasolabial crease, wound dehiscence and pin cushioning effect around the nasolabial fold.

Keywords Oral submucous fibrosis, Nasolabial flaps

Prognostic Significance of Lymph Node Ratio in Predicting the Outcome of Oral Squamous Cell Carcinoma: A Retrospective Study

Dr. Tanvy Subir Sansgiri

M.S. Ramaiah Faculty of Dental Sciences

Abstract

Background

The lymph node status is a very important prognostic factor in head and neck cancer. The presence of metastatic lymph nodes reduces the overall survival by 50%. Lymph node ratio (LNR) is defined as the ratio of number of positive lymph nodes to the total number of lymph nodes removed.

Aim

To investigate the prognostic value of lymph node ratio in oral squamous cell carcinoma.

Methods

Medical records of head and neck cancer patients from January 2016 to January 2021 who reported with loco-regional failure were analyzed. All patients had pathologically confirmed oral squamous cell carcinoma. LNR was calculated for each patient. The end points were overall survival (OS), local failure free survival (LFFS) and distant metastasis free survival (DMFS).

Results

A total of 33 patients were included in the study. Correlation of LNR with OS, LFFS and DMFS will be presented in this paper.

S. No. 83

Compartmental Resection versus Wide Excision in Tongue Cancers: Philosophy, Technique, Results

Dr. Sameep Shetty

Abstract

The vague definition of adequate surgical margins has often prompted oncosurgeons to recommend additional resection for the fear of recurrence despite the associated morbidity. Tongue is a mobile mucovascular pump and the cancers associated with this discrete subsite are often atypical with its erratic spread and aggressive biology. This retrospective included 40 patients with early-stage tongue cancer who underwent compartmental surgery/wide excision and primary reconstruction by free flap.

Results

The augmented 5 years disease specific survival and locoregionally relapse free rates in compartmental resection was observed with minimal functional sequelae in comparison to wide excision. The anatomy-based tongue resection eliminates the potential muscular, vascular, nervous, and lymphatic pathways: the viable seeds for tumour recurrence.

Reference

1. Carta F, Quartu D, Mariani C, Tatti M, Marrosu V, Gioia E, Gerosa C, Zanda JS, Chuchueva N, Figus A, Puxeddu R. Compartmental Surgery With Microvascular Free Flap Reconstruction in Patients With T1–T4 Squamous Cell Carcinoma of the Tongue: Analysis of Risk Factors, and Prognostic Value of the 8th Edition AJCC TNM Staging System. *Frontiers in oncology*. 2020 Jul 14;10:984.

S. No. 84

Recon of an Aggressive Masquerading Tumour: A Case Report and Review of Literature

Dr. Kala Bagavaty

Rajas Dental College and Hospital

Abstract

Meibomian gland carcinoma is a rare but lethal, highly malignant, slow-growing tumour of the eyelid arising from sebaceous glands of the eyelid such as meibomian glands, glands of Zeiss and caruncle. The tumour is more commonly seen in elderly females, commonly involving the upper eyelid. It is usually characterised by a high rate of local recurrence, regional, and distant metastases. Prognosis is still regarded as being poor when compared with other malignant eyelid tumours with mortality second only to malignant melanoma. This is a rare case report of an extensive meibomian gland carcinoma of the right upper eyelid in a 40-year-old male who came with a history of a rapidly growing solitary swelling of the upper eyelid hindering the closure of the respective eye. Histopathological examination was suggestive of meibomian gland carcinoma. Due to its aggressive nature, an orbital exenteration along with superficial parotidectomy was done and the defect was reconstructed with free flap anterolateral thigh. Given the rarity of this tumour, a review of literature was carried out.

References

1. Bhardwaj et al. (2020). Recurrent sebaceous gland carcinoma of upper eyelid—A case report. *International Journal of Innovative Science and Research Technology*. Volume 5(7).
2. Singh et al. (2019). Sebaceous gland carcinoma of eyelid: A rare case report. *European Journal of Biomedical and Pharmaceutical Sciences*. Volume 6(4); 312–313.

Reg. Num: 911

S. No. 85

Economic Impact of Cancer Treatment in Patients with HNSCC: A Pilot Study

Dr. Suthanraj A. K.

Sri Ramachandra Dental College and Hospital

Abstract

Cancer has a significant impact in measured by direct and indirect costs together. According to the World Health Organization, “a diagnosis of cancer in one of the adults in a family may lead not only to the loss of a source of income, but also all too frequently to exhausting the family’s remaining income and resources in seeking treatments. The annual GDP (gross domestic product) spent on health care is very low in developing countries compared to the developed countries. Cancer treatment leads to a significant financial burden on the cancer patients and their families. The primary objective of the study was to evaluate the economic consequences of cancer treatment in early and advanced stage Head and Neck cancer patients in Kanchipuram population.

Reg. Num.: 927**What is the Role of Sentinel Lymph Node Biopsy in Oral Cancer Management?***Dr. Samel Priyanka Mahesh**Tata Memorial Hospital***Abstract**

Guidelines for ideal management of the N0 neck keep evolving in oral cancer. Sentinel node biopsy can accurately detect microscopic metastasis in regional lymph nodes. The technique was hypothesized to be reliable in staging the N0 neck and ensuring oncological safety in patients with early-stage oral squamous cell carcinoma. Landmark trials like the SENT trial explore the less morbid option of sentinel node biopsy in N0 neck management. This poster aims to review current scientific evidence about its rationale, methodology, applications, advantages and disadvantages in clinical scenario.

References

- Schilling C et al. Sentinel European Node Trial (SENT): 3-year results of sentinel node biopsy in oral cancer. *Eur J Cancer*. 2015 Dec;51(18):2777–84.
- Hutchison IL et al. Nationwide randomised trial evaluating elective neck dissection for early stage oral cancer (SEND study) with meta-analysis and concurrent real-world cohort. *Br J Cancer*. 2019 Nov;121(10):827–36.

Atypical Initial Oral Presentation in a Leukemic Patient*Dr. Joanna Baptist**Manipal College of Dental Sciences, Manipal Academy of Higher Education***Abstract**

Leukaemia is a malignant neoplasm of hematologic origin, that can present with varied initial manifestations including; pallor, fatigue, fever, anaemia, bleeding, and infection related to peripheral blood cytopenia. Oral manifestations may include posterior palatal haemorrhage, gingival bleeding, gingival hyperplasia and oral mucosal ulcers. Oral mucosal ulcers are common findings in leukemic patients. Neutropenic ulceration may follow obvious mucosal damage due to factors such as: mechanical trauma, herpetic infection, and drug-induced toxicity however, they may also arise in the absence of identifiable precipitating factors. Oral tissue necrosis following bacterial infection is rare in immunocompetent individuals but is a relatively common component of infectious disease in immunocompromised patients. In this scientific poster we will be presenting an atypical initial oral presentation in a leukemic patient. This patient presented to us, with an almost complete exposure of mandible intra-orally till the lower border of mandible. Over time, as chemotherapy was initiated for leukaemia and the blood counts improved, the exposed mandible granulated and re-epithelialised to a great extent leaving only alveolar bone in the anterior and premolar region on the left side exposed and nonviable. This case taught us that, deferring aggressive management in such cases may benefit the patient and exceed the harm done by aggressive management of the initial presentation.

S. No. 86**Five Year Retrospective Analysis of N0 Early Oral Cancers***Dr. Yaseer Arafat S.**Orange Clinics***Abstract****Aim**

Subset retrospective analysis of n0 early oral cancers over the period of 5 years.

Method

All data collected from Department of Surgical Oncology over the period of 5 years was used in this retrospective analysis. The various subset analysis used in the study are level of dissection (selective neck dissection), number of nodes retrieved, number of nodes involved, sub-sites, grade of tumour, depth of invasion, lympho-vascular invasion, peri-neural invasion, disease free survival and overall survival.

Conclusion

Invariably all N0 early oral cancers have 10–15% risk of nodal metastasis must undergo selective neck dissection.

Reg. Num.: 933**S. No. 87****Sarcomatoid Squamous Cell Carcinoma: A Catch 22 Situation for the Pathologists and the Surgeons***Dr. Charudatta Shridhar Nayak**Terna Dental College, Navi Mumbai***Abstract****Introduction**

Sarcomatoid squamous cell carcinoma (SCSC) is rare and occurs mainly in the upper aerodigestive tract such as the oral cavity, oesophagus and vocal cords. It is a unique variant of squamous cell carcinoma consisting of sarcomatoid proliferation of pleomorphic spindle-shaped cells sometimes with a biphasic appearance presenting as a part of frank squamous cell carcinoma. This type of carcinoma has been incorrectly described using various terms, including spindle cell squamous carcinoma, carcinosarcoma, pseudo sarcoma and pleomorphic carcinoma.

Methodology

Four cases of sarcomatoid squamous cell carcinoma (SCSC) of the oral cavity were studied clinicopathologically, immunohistochemically, and ultra-structurally to summarize the clinicopathological features of this rare neoplasm and to discuss the debatable histogenesis of the sarcomatoid component and the differential diagnosis of SCSC.

Results

The mean age of the patients was 51 years and the female to male ratio was 1:2. One of the patients had a history of irradiation for pre-existing squamous cell carcinoma. Two patients had no history of exposure to tobacco or tobacco-related products. One patient had a recurrence following wide local excision. Another patient was detected with distant metastasis 8 months following wide local excision along with modified radical neck dissection.

Discussion

The behaviour of SCSC seems to be more aggressive than that of SCC at a similar stage. Setting wider safety margins (> 2 cm) during surgical intervention is suggested. In the case of locoregional recurrence, salvage operation showed some benefit. Seeking an effective chemotherapy protocol is important for the control of distant recurrence.

Reg. Num.: 967

S. No. 88

Boat v/s Block Resections. Can Mandibular Resections Be More Conservative?

Dr. Abhijith George

Kochi

Abstract

Segmental mandibulectomy is performed for advanced cancers of the oral cavity and is quite a challenge to reconstruct. In segmental resections, osteotomy cuts are made perpendicular to the body of the mandible which is parallel to one another. While we follow a 1 cm margin in soft tissue it's not the case when we address the bone. Bone margins are usually marked 1 cm away from tumour in the upper border of mandible but fail to converge in lower border. Excess bone is inevitably removed during the osteotomies in most instances. We can address this problem by placing angulated converging osteotomy cuts (BOAT Resection), in which both osteotomies converge at the lower border thereby preserving maximum amount of bone in the lower border.

Methods

A retrospective analysis was conducted on 334 patients from 2014 to 2020 who underwent treatment for oral cavity squamous cell carcinoma in the Department of Head and Neck Surgical Oncology in a tertiary care cancer centre in India. A total of 358 patients were diagnosed with OCSCC of which 98 patients underwent mandibular resections, out of which 28 patients underwent segmental resection and 70 patients underwent marginal mandibulectomy.

Results

We present a case series of 28 patients who underwent segmental mandibulectomy of which 16 patients underwent regular segmental resection and 12 patients underwent modified segmental-BOAT resection. Both the groups had comparable survival rates. One patient in "Boat" resection group developed distant metastasis and 5 patients in Box resection group developed recurrence. Patients who underwent Boat resection and reconstruction with local flap had less post surgical complications and fewer hospital stay when compared to other group.

Conclusion

Boat resection can be safely attempted in cases with minimal bone involvement in the lower border, thus decrease bony defect in final segmental defect thereby using a local bony flap.

Reg. Num.: 1012

S. No. 89

Depth of Invasion: Oracle of Oral Tongue SCC

Dr. Manish Kumar Singh, Dr. Mohit B. Shankar

Abstract**Introduction**

Regardless of its early diagnosis and treatment, almost 20% of patients with early-stage oral tongue squamous cell carcinoma (OTSCC) still die of their disease. Depth of invasion is one of the most imperative independent factor affecting the outcome in the cases of OTSCC. We have tried to predict the overall outcome of patients with OTSCC by assessing the accuracy between radiologic depth of invasion (r-DOI) and pathologic depth of invasion (p-DOI) and extrapolating r-DOI to evaluate the overall survival (OS) and disease-free survival (DFS) at a tertiary cancer centre.

Patients and Methods

A total number of 307 patients with OTSCC, who were treated at the KMIO between the period of 2015–2017, were retrospectively analysed to measure the accuracy of r-DOI and p-DOI and calculate the OS and DFS.

Results

We found very strong correlation between r-DOI and p-DOI with rho value of 0.82. For every 1 mm increase in radiologic DOI, the pathologic DOI significantly increases by 0.78 mm at $p < 0.001$. We inferred that r-DOI is a significant tool for measuring OS and DFS. For every 1 mm increase in r-DOI, the OS significantly decreases by 0.12 years/1.44 months at $p < 0.001$ and the DFS significantly decreases by 0.09 year/1.08 month $p = 0.003$ respectively.

Conclusion

DOI is the predominant independent prognostic factor for locoregional control and survival after the diagnosis of OTSCC.

Reg. Num.: 1089

S. No. 90

Assessment of Depression, Anxiety and Stress Levels in Patients Undergoing Oral Cancer Surgery

Dr. Pranay Pradeep Pardeshi

B.S.E.S. M.G. Hospital

Abstract**Background**

The diagnosis of oral cancer can cause considerable impact not only on the mental health but also on the overall wellbeing of the patient.

Aim and Objectives

The study aims to assess depression, anxiety and stress levels in patients undergoing oral cancer surgery.

Material and Methods

DASS 21 questionnaire format was used. 25 patients who were operated from 15th January, 2021 to 15th April, 2021 were randomly selected and given the questionnaire to be filled based on their experience during the treatment at 1st follow up visit. 4 questionnaires were incomplete therefore 21 questionnaires were included as part of the study. All the data was collected and statistical analysis was done.

Results

Out of 21 patients, 13 were male and 8 were female. The mean age was 49.43. On DASS scale the mean Depression, Anxiety and Stress score was 20.05, 19.24 and 22.67 respectively. The score indicates that level of depression, anxiety and stress as moderate, severe and mild respectively.

Discussion

Oral cancer patients suffer substantially from psychological distress and experience anxiety and depression. Yuan et al. (2020) too stated

that there was high prevalence of anxiety symptoms and depressive symptoms among oral cancer patients. There is the need to add fourth dimension in treatment protocol to better understand the suffering and treat even more efficiently.

Conclusion

There was a significant rise in level of depression, anxiety and stress which was noticed in patients who underwent oral cancer surgery. Surgeon needs to treat these parameters too for better outcomes.

Reg. Num.: 1240

S. No. 91

The Role of Robotics in The Scenario of Oncomaxillofacial Surgery: A Review of Current literature and Looking Forward

Dr. N. Pramukh

K.L.E. Dental College and Hospital

Abstract Summary

The means of therapy in oncologic diseases have been improving continuously over the past years, intending to improve the overall survival and quality of life of affected patients. In head and neck oncology surgery is one of the key pillars in curative treatment. The standardized surgical techniques are supplemented and improved by the application of technical devices. The ambition is the reduction in peri- and postoperative morbidity, hospitalization time, and the enhancement of functional outcome. The purpose of this review is to outline the current status of robotics in head and neck surgery in the context of the current literature, to demonstrate reasonable application fields, and to discuss the expenditure of the usage of such tools.

Background

In the past few years, surgical robots have recently entered the medical field, particularly in general surgery. However, the clinical effectiveness and safety of robot-assisted surgery (RAS) in the field of head and neck surgery has not been clearly established. In this review, we evaluate to what extent RAS can be applied in head and neck surgery, in which fields it is already daily routine and what advantages can be seen in comparison to conventional surgery. For this purpose, we conducted a systematic review of trials published between 2000 and 2021, as well as currently ongoing trials registered in clinicaltrials.gov.

Conclusion

The question of finances still not answered and the systems on the market still require some specific improvements for the use in head and neck surgery.

Reg. Num.: 1317

S. No. 92

Case Report: Verrucous Carcinoma with a Vivid Occurrence and Therapeutic Modalities

Dr. M. U. Aishwarya, Dr. Chitra Chakravarthy

Navodaya Dental College and Hospital, Raichur

Abstract

Verrucous Carcinoma, also called as Ackermans tumor is a low-grade variant of squamous cell carcinoma, occurs in only 1–3 of every 10 lakh individual a year. It affects any part of skin/mucosa but is common in oral cavity and genitalia. In this case report a 55 year old female patient reported with a hyperplastic cauliflower like growth with surrounding white patches in the left buccal mucosa extending from angle of mouth to pterygomandibular raphae region. Incisional biopsy was performed and was diagnosed as verrucous carcinoma based on histopathological report. Wide local excision was performed under local anesthesia. The exposed raw surface area was covered with a collagen membrane for secondary epithelialization. A good treatment outcome as well as an improvement in the mouth opening was noted postoperatively during follow up period.

Reg. Num.: 1336

S. No. 93

Infra-temporal Fossa Clearance: To Do or Not to Do? A Literature Review

Dr. Sneha Kulkarni

H.C.G. Manavata Cancer Centre, Nashik

Abstract Introduction

Oral cancer involving infratemporal fossa (ITF) is classified as very advanced local disease (T4b) and were considered unresectable traditionally. Patients are either treated with Neoadjuvant chemotherapy, followed by surgery or with a palliative intent. However, there are few studies which suggest that aggressive resection in these group of tumours can improve clinical outcome.

Aim

To review the studies to evaluate the clinical outcome of infratemporal fossa clearance in T4b lesions.

Methods

A literature review was done involving studies from 2015 to 2021, which evaluated clinical outcomes on clearance of ITF in T4b lesions and analysis was done based on recurrence at ITF, disease free survival and overall survival of the patient.

Results

Recurrence at ITF was higher in patients with residual disease (R1) and poor histological pattern.

Conclusion

Infratemporal fossa clearance can be considered for certain categories of very advanced diseases with better prognostic factors and achievable free surgical margins. However further research and trials need to be conducted to evaluate the clinical outcomes of these patients in the current scenario with advances in technology and precision techniques.

Reg. Num.: 1355

S. No. 94

Managing the Neck in Oral Cancers: Is Less Too Little and More Too Much?

Dr. Deepika Kenkere

Sri Devaraj U.R.S. Medical College

Abstract

Addressing the neck in oral cancers has always been a contentious issue. Several factors play a decisive role in selecting the type of neck dissection. The earliest and most aggressive approach to the neck was the radical neck dissection (RND). Moving away from this radicality, modified radical neck dissection (MRND) preserved one or more of the non-lymphatic structures. Thus emerged the functional neck dissection (FND) where all the non-lymphatic structures were preserved. Heading further towards conservation, selective neck dissection (SND) addressed specific levels of lymph nodes which were at risk of harboring metastasis based on the location of the primary tumor. With the advent of sentinel node biopsy, super selective neck dissection has found a place for itself in the gamut of neck dissections. Each of the above neck dissections have specific indications. Literature is replete with studies which have considered multiple factors in selecting the appropriate type of neck dissection (1) and whether or not the neck should be electively addressed (2). This paper aims to demystify the conundrum that surrounds management of the neck in oral cancers. An algorithm for addressing the neck will be presented.

References

1. Pantvaidya G, et al. Management of the neck in oral cancers. *Oral Oncol.* 2020 Jan;100:104,476.
2. D'Cruz A, et al. Elective versus Therapeutic Neck Dissection in Node-Negative Oral Cancer. *N Engl J Med* 2015;373:521–29.

Category: Miscellaneous**Reg. Num.: 1395****S. No. 95****A Retrospective Study of Complications of Cranioplasty: 7-Year Period***Dr. Major Ashok Kumar**Govt.***Abstract****Objective**

To discuss the intraoperative and postoperative complications of cranioplasty and management during a 7-year period.

Method

Retrospective study of 7-year period of 63 patients including both male and female.

Results

Highest experienced complications were seizures and dural tear, i.e., 6%, followed by EDH in 3% patients, hydrocephalus and pneumocephalus combined 3%, 1.6% CSF collection and flap necrosis each. All the complications were managed successfully.

Conclusion

Complications of cranioplasty can be managed by following sound surgical principles. Serious complications like meningitis, air embolism and death are rare.

Reg. Num: 114**S. No. 96****Oral Myiasis: Review of Cases and Literature Update***Prof. Dr. V. K. Prajapati**Dental Institute, R.I.M.S., Ranchi***Abstract**

Myiasis can be defined as an invasion of living tissue of men or other mammals by dipterous larvae (Hope 1850) whereas invasion of living tissue of oral cavity by same larvae is known as oral myiasis (Laurence 1909). Though this is not a very common disease of developed world but rarely we do encounter such cases in India. Presentation of the oral myiasis is ugly, obnoxious and dejective. Sometimes the living larvae keep on outpouring from oral cavity. These larvae are most commonly produced by house fly which can be classified under Class—insecta, Phylum—arthopoda. The diagnosis can be made by direct vision. These cases can be managed by meticulous debridement with the help of turpentine oil and other supportive treatment. Prevention is better than cure, and Oral myiasis is not an exception to this. We should always try to identify the risk factors and prevent occurring of this disease.

Reg. Num: 132**S. No. 97****Caldwell Luc in the Era of Endoscopic Approach for Maxillary Sinus***Dr. Rajashekar D. Gadad**Army Dental Corps***Abstract**

Caldwell Luc is a historical procedure for the maxillary sinus, which is more than 100 years old and is still the procedure of choice among surgeons for various maxillary sinus pathologies. In the era of endoscopic sinus surgeries, the usefulness of Caldwell Luc is often questioned. We report 2 cases of chronic maxillary sinus disease one with an iatrogenic tooth root in sinus for 2 years and other with a mucosal polyp both of which were managed endoscopically earlier but with recurrence of symptoms. Both the cases were managed using a modified Caldwell Luc approach. The patients were asymptomatic postoperatively with no recurrence.

Reg. Num.: 157**S. No. 98****Transoral Odontoidectomy: Role of a Maxillofacial Surgeon***Dr. Nilabja Ray, Dr. Mukherji Srijon**Calcutta Institute of Maxillofacial Surgery and Research*

Abstract**Background**

The transoral approach to the craniovertebral junction is an excellent surgical technique for treating ventral midline extradural compressive pathologies. The target region is reached by an approach crossing the oral cavity through an open mouth [1, 2].

Objective

To showcase a unique surgical technique that falls within the maxillofacial domain.

Method

We present a case of fused odontoid processes of C1 and C2 vertebra which is surgically approached via mouth. This is a direct approach through an avascular plane intraorally, as compared to the conventional ventral route to treat such pathologies.

Conclusion

Transoral odontoidectomy allows direct access to the clivus, craniovertebral junction and the anterior aspects of the first three cervical segments. Maxillofacial surgeons have got a clear knowledge and expertise about the oral anatomy and different techniques of management of oral tissues. Thus, it could be an outreach practice of maxillofacial surgeons in the joint domain with neurosurgery; this additional exposure will strengthen the inter-specialty bond with many favorable outcome for the maxillofacial surgeons of tomorrow.

References

1. Wang, X., Ma, L., Liu, Z. et al. Reconsideration of the transoral odontoidectomy in complex craniovertebral junction patients with irreducible anterior compression. *Chin Neurosurg JI* 6, 33 (2020).
2. Apostolides PJ, Vishteh AG, Sonntag VKH (1998) Technique of transoral odontoidectomy. *Operative Techniques in Neurosurgery* 1:58–62

Reg. Num.: 168**S. No. 99****The Impact of Orthognathic Surgery in Temporomandibular Joint Dysfunction***Dr. Namitha S. Prem**Government Dental College, Kozhikode***Abstract****Introduction**

Orthognathic surgeries involve the positional changes of mandible and maxilla; which affects TMJ, masticatory musculature and its surrounding soft tissues. Hence directly or indirectly surgeries influence TMD symptoms as well. An increased prevalence of temporomandibular joint dysfunctions is often noted in dysgnathic patients. It may be because of the presence of malocclusion which are considered as one among the etiological factors of temporomandibular joint dysfunction. Hence it is important to understand the relation between TMJ and orthognathic surgery so as to formulate treatment plans accordingly to prevent worsening of TMD symptoms.

Aim

To find out the effect of orthognathic surgery in temporomandibular dysfunction symptoms.

Objectives

1. To evaluate subjective treatment outcome after orthognathic surgery in terms of changes in existing TMD symptoms.

2. To find out the percentage of appearance of new onset of TMD symptoms after orthognathic surgery

Materials and Methods

Pain, joint noise, limitation of mouth opening, joint locking, tenseness of muscles, deviation of mouth opening parameters were assessed subjectively through a structured proforma given to the patients pre and post operatively.

Result

Noise, joint locking, deviation of mouth opening parameters showed significant improvement postoperatively 13% of cases show new onset of symptoms.

Conclusions

The result of this study asserts that orthognathic surgical treatment significantly reduces the prevalence of TMD symptoms. The decrease in TMJ symptoms after surgery may be explained by the improvement in occlusal relationship and the reduction of emotional stress after correction of the jaw deformities.

Reg. Num.: 170**S. No. 100****The Antibiotic Resistance Crisis and Its Clinical Impact on Orofacial Infections: A Tertiary Care Institution Experience***Dr. Deepthi Shetty**S.D.M. College of Dental Sciences and Hospital***Abstract****Background**

Orofacial infections are polymicrobial in origin which are caused by aerobic, facultative and obligate anaerobic microorganisms. If not treated at an early stage, it may lead to potentially life-threatening complications such as airway compromise, mediastinitis, cervical necrotizing fasciitis, cavernous sinus thrombosis, septicemia and shock. Recent years have witnessed significant changes in the spectrum of microorganisms isolated and bacterial resistance to empirical antibiotic therapy. Hence it is very important to evaluate the susceptibility and resistance of microorganisms as they are considered as a public health problem.

Aims and objectives

To investigate if there has been a change in the microbiology and antibiotic sensitivity of orofacial infections over the last 10 years.

Methods

A retrospective study was done at SDM craniofacial unit on inpatients who were admitted for orofacial infections from January 2010 to December 2020. Patient's demographic details, associated medical conditions, involved facial space(s), and culture sensitivity test report was obtained and statistically analyzed.

Results

The microorganisms associated with odontogenic infections were principally aerobic (44.5%) followed by anaerobes (33.3%) and mixed organisms (22.2%). The predominant bacteria were streptococci (31.81%) followed by staphylococci (30.30%), enterococcus (13.63%) and klebsiella species (12.12). In our study streptococci, staphylococci, enterococcus and klebsiella showed 100% resistance to amoxicillin whereas streptococci showed 28.5% resistance to amoxicillin clavulanic acid, Staphylococci showed 60% resistance, enterococcus showed no resistance and Klebsiella showed 16.7% resistance.

Conclusion

Our results show no significant change in the microbiology and antibiotic sensitivity of odontogenic head and neck infections over the last 10 years. Amoxicillin–Clavulanic acid continues to remain as an empirical antibiotic of choice in treatment of orofacial infections.

Reg. Num.: 192

S. No. 101

Orbital Exenterations in Mucormycosis: A Retrospective Analysis

Dr. Tulasi Nayak

Ragadore Memorial Hospital

Abstract**Introduction**

Mucormycosis is a devastating angioinvasive fungal infection seen mostly in immune compromised hosts. It progresses by causing extensive thrombosis and tissue necrosis and has a high mortality rate. In this manuscript, we would like to highlight our experience with intraconal disease in COVID associated mucormycosis (CAM).

Methodology

In this retrospective observational case series, all patients treated for intra conal extension of COVID associated rhinocerebral mucormycosis at 3 tertiary centres between April 2021 and July 2021 were studied. The data in this study has been derived from the patient case files. All patients were reviewed by the ENT, Maxillofacial, Ophthalmology and Neurosurgical teams. The history and clinical findings were recorded following which an MRI of the brain and orbits as well as a CT of the craniofacial skeleton was ordered.

Results

A total of 27 patients were treated with exenterations. 7 of these patients also required intracranial abscess excision and 8 patients needed a concurrent maxillectomy. All patients treated with exenteration had frank intraconal disease, extensive involvement of the orbital walls, total loss of vision and total ophthalmoplegia. These were patients in whom intracranial disease had occurred or there was an imminent threat of an intracranial spread. 2 of our patients required bilateral exenterations. We referred one patient out as they desired to be treated elsewhere. We conducted a single such surgical procedure. 7 patients have died during the followup period.

Discussion

Exenterations are highly morbid procedures. However, early aggressive surgical therapy and appropriate medical management can help improve the chances of survival.

Reg. Num.: 372

S. No. 28

Prevalence of Trigemino-cardiac Reflex in Patients Undergoing Surgery for ZMC Fracture

Dr. Priyanka Mhamunkar

Abstract**Introduction**

The trigeminal cardiac reflex (TCR) is a unique brainstem reflex that manifests as typical hemodynamic perturbations including sudden lowering of heart rate (HR), mean arterial blood pressure (MABP),

cardiac arrhythmias, asystole, and other autonomic reactions such as apnea and gastric hypermotility. TGC reflex is seen during the ocular surgeries and during Lefort fractures and has been widely discussed in the literature. However, the prevalence of the Trigemino-cardiac reflex hasn't been studied in zygomaticomaxillary complex fractures. This study shall tell us the prevalence of trigemino-cardiac reflex in zygomaticomaxillary complex fracture fixation.

Methodology

The study comprises of 26 participants having ZMC fractures indicated for surgical intervention. The aim of the study is to find the prevalence of trigemino-cardiac reflex in patients undergoing surgical intervention (elevation of ZMC with/without fixation) under LA/GA. The heart rate and blood pressure is measured pre-operatively, intra-operatively and post-operatively.

Results

Variation in both heart rate and BP was seen in both LA and GA Group. However, decrease in the heart rate i.e., bradycardia is noted intraoperatively in 7 patients i.e., 87% of the patients in LA group. The prevalence of TGC reflex is in 3 out of 18 i.e., 16% cases operated under GA.

Conclusion

In our study, we have concluded that TGC was seen in the patients operated for ZMC under LA than GA. However, the blood pressure variations throughout the procedure weren't significant.

S. No. 29

Minimal Clinically Important Difference (MCID) of Pain in Maxillofacial Trauma Patients: A Prospective Observational Study

Dr. G. Aparna

AIIMS Jodhpur

Abstract**Background**

While researchers focused on classical research methodologies and statistics to assess the operative success, there is a still lacunae in the patient reported outcomes (PROs) in maxillofacial trauma.

Aim

To estimate the MCID of pain for patients treated for maxillofacial trauma thus establish a minimum threshold for successful treatment in terms of MCID for VAS.

Methodology

A prospective observational study on patients with maxillofacial trauma was conducted at a tertiary health care center. Patients were given standard care. Preoperative (T1) and 1-month postoperative (T2) pain scores in terms of VAS-NRS and bite force (T2) assessing function were recorded. The follow-up examination included a 4-item question evaluating the improvement of pain on a Likert scale, which served as an anchor to determine MCID by mean change method.

Results

A total of 113 patients were scrutinized out of which 70 patients (68 males and 2 females) were enrolled in the study. The mean preoperative VAS was 8.0 ± 1.26 and postoperative VAS at 1-month was 1.34 ± 0.85 . MCID for pain was 5.93 on VAS by mean change method. The mean preoperative bite force was 24.33 ± 20.56 N and at postoperative 1 month was 231.84 ± 187.91 N ($p < 0.01$) similar to the bite force (313.9 N) of healthy controls.

Conclusion

Through this study, we establish that MCID of pain by 5.93 on VAS is relevant for maxillofacial trauma patients and should be considered as

a patient reported treatment outcome in addition to statistically significance.

S. No. 30
Massive Cervicofacial and Intramuscular Emphysema: A Case Report

Dr. Chaitrali Suhas Sant

KLE VK Institute of Dental Sciences

Abstract

Introduction

Subcutaneous emphysema defined as air entrapment beneath the skin and characteristic crepitation is palpated. Etiologies include trauma, iatrogenic dental injuries or spread of air through the thorax.¹

Purpose

To present a case report with massive cervicofacial subcutaneous and intramuscular emphysema.

Material and Methods

Here we present a case wherein a patient came to casualty with a history of skid. Patient was conscious oriented. Clinically patient had massive swelling all over the face suspecting of fracture but on palpation there was absence of step and crepitus was present. CT scan showed diffuse subcutaneous and intramuscular emphysema bilaterally from parieto-temporal regions till deep neck space. CT thorax showed Pneumothorax.

Result

The treatment done was immediate ICD insertion. For cervicofacial emphysema patient was kept under observation. Postoperatively swelling was reduced and no crepitus was palpated. Patient was maintaining saturation at room air.

Conclusion

Cervical emphysema is usually seen in association with penetrating trauma. Management depends on degree of airway compromise and usually involves surgical release and the advice against acts that increase intrathoracic pressure postoperatively so as to prevent recurrence.

References

1. Melville JC et al. Massive Self-Induced Subcutaneous Cervicofacial, Pneumomediastinum, and Pneumopericardium Emphysema Sequelae to a Nondisplaced Maxillary Wall Fracture: A Case Report and Literature Review. *J Oral Maxillofac Surg.* 2019;77(9):1867.e1–1867.e8
2. CGJ et al. Spontaneous cervical emphysema: a challenge in establishing a plausible etiology. *Int J Med Res Rev.* 2016;4(11):1943–5.

S. No. 31
Management of Penetrating Injuries to Maxillofacial Region

Dr. Somashekhar V. Ulasandra

K.V.G Dental College and Hospital

Abstract

Penetrating injuries to maxillofacial regions are most commonly due road traffic accident or self inflicted. Penetrating injuries to the

maxillofacial region are those in which an object penetrates the tissues, hard or soft, and remains lodged within a structure or structures. Penetrating injuries can be superficial or deep this depends on type of object. Materials commonly retained within the oro facial regions include pieces of glass, wooden fragments, knife blades and bullets. The Successful management of penetrating injury to the maxillofacial region depends on a clear understanding of the anatomy of the face. The clinical presentation of penetrated injuries are stab wounds, lacerations, contusions, Here we represent two cases of foreign body penetrating injury to Right upper Buccal vestibule and Left Malar region in patients who met with RTA in two different scenario. A 30 year old patient had penetration of rod into right upper buccal vestibule. After thorough clinical and Radiological investigation x-ray PNS View was made foreign body penetrating buccal soft tissue is noted on the right side is present. Subsequently managed. Another case of foreign body penetration in a 30 years old patient had a complaint of Pain over left middle third of face. Thorough clinical and radiological examination revealed that foreign body penetration into left malar region. Under all aseptic precautions foreign body is removed and sutures were placed.

S. No. 32
Comparison of Outcomes Following Mucosal Incisions Using Electrocautery with Flat Tip, Colorado Micro Dissection Needle and Conventional Scalpel in Maxillofacial Surgery: A Cross Sectional Study

Dr. K. Hemavathy

Sri Ramachandra Institute of Higher Education and Research

Abstract

Aim

The aim of this study was to clinically and histologically compare mucosal incisions in surgical procedures with scalpel, electrocautery with flat tip and Colorado microdissection needle.

Materials and Methods

This is a prospective split mouth study with 18 patients with 36 standardized incisions were performed in oral mucosa by scalpel, electrocautery with flat tip and electrocautery with Colorado microdissection needle. Specimens were classified into two groups according to tool used for surgical excision. Group A: 18 specimens excised through a Bard-Parker (BP) scalpel blade no. 15c and electrocautery with flat tip; Groups B included 18 specimens each excised through electrocautery with microdissection needle. Cut margins of biopsy specimens, adjacent peripheral mucosa were evaluated using light microscopy and histologic zones were identified, assessed: For epithelial changes, incision morphology, lateral tissue damage. Intra- and post-operative parameters assessed were the duration of surgery, bleeding and postoperative pain.

Results

Immediate hemostasis was seen with electrocautery compared to scalpel, mean time taken by electrocautery was less compared to scalpel. The analysis of regularity of incision and postoperative pain experienced by patients revealed a statistically significant difference. Histologic damage was least with scalpel. The extent of degeneration was lowest with scalpel followed electrocautery with Colorado microdissection needle and electrocautery with flat tip.

Conclusion

Colorado microdissection needle may be a better choice for incisions as it seems to show less tissue damage than cautery with flat tip and offers tissue healing comparable to scalpel blade.

S. No. 33**Does the Time from Injury to Surgical Intervention Influence Infectious Complications in Compound Mandibular Fractures?: A Prospective Study***Dr. Sundheep Kumar V., Dr. Saravanan R.**Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER)***Abstract****Background**

Traditional wisdom recommends that compound mandibular fractures should be treated at the earliest with semi-rigid or rigid fixation. There are no clear-cut guidelines on what is ideal time to treat compound fractures of the mandible and paucity of evidence on time within which a surgeon must take a fractured mandible to surgery.

Objectives

To analyse whether the time from injury to definitive surgical intervention of compound mandibular fractures is an independent contributing factor in post-operative infectious complications.

Methods

This prospective study included 83 patients who underwent Open Reduction and Internal Fixation of dentate portion of mandibular fractures beyond 72 h from injury time. Post-operative Surgical Site Infections and Non-Infectious complications were recorded. Interventions required to manage the SSI and non-infectious complications were also analysed. Potential risk factors were subjected to univariate and logistic regression analysis.

Results

Time to definitive surgical intervention ranged from 4 to 19 days. SSI was documented in 8 patients and hardware complications were observed in 11 patients. 2 patients needed repeat surgical intervention due to hardware failure and non-union of the fracture. The median time to ORIF was 6.5 days in patients who developed SSI and no significant difference was observed when compared to those with uneventful outcome.

Conclusion

This study observed SSI complications in less than 10%. The injury time to surgical intervention was not observed to be an independent contributing factor in post-operative infectious complications of compound mandibular fractures.

S. No. 102**Perioperative Anaesthetic and Surgical Consideration in the Management of Post Covid 19 Patients in Maxillofacial and Head and Neck Cases: A New Challenge***Dr. Kritant Bhushan**Armed Forces***Abstract**

As the second wave of COVID-19 receding, numerous patients who have recovered from the disease are reporting for elective/emergency surgery including craniomaxillofacial trauma, congenital anomalies, pathology or for a complication arising from COVID-19, such as mucormycosis. There is insufficient published literature, guidelines, or protocols regarding the perioperative management, surgical consideration, protocols to follow for morbidity and mortality of COVID-19-recovered patients. SARS-CoV-2 infection primarily affects the

pulmonary and cardiac systems but has the potential for involvement of multiple systems with both short-and long-term sequelae. Post-COVID syndrome can include symptoms related to residual inflammation, organ damage, impact on pre-existing health conditions, non-specific effects due to hospitalisation or prolonged ventilation (post-intensive care syndrome). The patients can be on polypharmacy, including steroids and anticoagulants. All these factors can have significant implications, which make the perioperative management of post-COVID-19 patients challenging. In this paper, we share important perioperative management, anaesthetic and surgical considerations and protocols when operating on post-COVID 19 patients.

Category: Head and Neck Oncology**S. No. 1****Evolving Trends in Acumen for Orbital Exenteration: A Two Case Report***Dr. Afshan Afreen**Rama Dental College Hospital and Research Center***Abstract**

The need to remove an eye or other orbital contents is always difficult to digest for a patient. Many of them usually experience five stages of grief as described by the Swiss psychiatrist Elisabeth Kübler-Ross in her book, “On Death and Dying” (1969), inspired by her work with terminally ill patients. Case report—presenting a case report of 2 patients who needed orbital exenteration, first patient was a 43-year-old male patient who was diagnosed with maxillary sinus cancer involving the orbit and other patient was a young man who 17 year old diagnosed with Mucor-mycosis of the right side of the alveolus involving inferior rectus muscle of the orbit and maxillary antrum. The removal of the eye in any surgical variants (enucleation, evisceration, and exenteration) requires a careful and thorough planning process. A detailed patient explanation of the causes that have led to this type of surgery is mandatory as a breakdown of the consequences of the operation. These explanations should be extended to the family as the immediate aesthetic impact not only affects the patient but also the people around them. The surgical procedure must be done with thoroughness and patience as it is the main key factor that decreases the rate of complications and recurrence.

S. No. 2**Selective Neck Dissection in N0 Necks in Oral Squamous Cell Carcinoma: A Retrospective Study of 61 Cases***Dr. Anurag vats**Rama Dental College Hospital and Research Center***Abstract**

Neck dissection can be classified as radical neck dissection, modified neck dissection, selective neck dissection and extended neck dissection according to the committee for head and neck surgery and oncology in 2002. The types of selective neck dissection are supraomohyoid neck dissection that is the dissection of levels 1–3 (SOHND), anterior neck dissection and posterolateral neck

dissection. SOHND has been re-designed as selective neck dissection or SND (I–III). The aim of the study is to clinically evaluate the efficacy of Selective Neck Dissection in N0 oral SCC. A retrospective study was done in all selective neck dissections of clinically neck negative oral Squamous cell carcinoma patients being operated in between the period of June 2008–until September 2015 in which a sample size of 61 patients was recorded. In our study it is to be noted that in all the cases under consideration no NECK RECURRENCES in the field of surgery has been seen. Prognosis for patients with early stage oral cancer is excellent with expected cure rates of 86% and 65% for stage I and II disease, respectively (Vokes et al. 1993). It is obvious that neck dissections must remove the most lymph nodes from the selected chains, as well as identify them, thus enabling proper staging and adjuvant treatment. The greater number of lymph nodes collected in the dissection may identify a group with better prognosis in N0 cases.

S. No. 2

Glycopyrrolate: Boon or Bane—A Study

Dr. Mohd Zuheeb Khan

Rama Dental College Hospital and Research Center

Abstract

There has been little emphasis in past upon management of excessive secretion, sialorrhoea, salivary fistula and sialoceles in patient who were operated for head and neck cancer surgeries. These are well known complications and can represent a challenging clinical scenario. In this poster, we present cases of head and neck cancer patients with and without use of glycopyrrolate. Glycopyrrolate, an anticholinergic agent, is usually used to reduce secretion and promote healing. This Prospective study was conducted on patients undergoing head and neck cancer surgery with resection of oral cavity tumours; between November 2019 and September 2021. There are two groups Group A with glycopyrrolate and Group B without glycopyrrolate. Within the follow-up period of 2 years Group A patients had less no. of complications with decreased secretion as compared to Group B. Glycopyrrolate may be a useful adjuvant in the management of secretion and also helps in post operative reduction of complications and also helps in healing.

S. No. 3

Histopathological Analysis of Vascular Invasion in Oral Squamous Cell Carcinomas

Dr. Divya Jivrajani

Al-Badar Rural Dental College and Hospital, Gulbarga

Abstract

Study of lymphovascular invasion is essential for understanding the invasiveness of the tumor, because that would directly influence the prognosis, recurrence and the survival rate of the patient. The aim is to study peritumoral vascular invasion in oral squamous cell carcinoma using immunohistochemistry analysis [IHC]. To correlate tumor depth with vascular invasion and to correlate neck node status with vascular invasion. 14 Patients with oral squamous cell carcinomas were prospectively enrolled for the study. Following data was

recorded: tumor depth, tumor size and lymph node status. IHC staining was done for CD31, CD34 and Pan CK markers to study the vascular invasion in peritumoral tissue which is defined as the presence of aggregates of tumor cells within endothelial lined spaces. CD 31 and CD 34 were used as endothelial markers. Out of the two stains used, CD34 took up better staining. Pan CK was used as marker for tumor cells which were seen as the presence of aggregates of tumor cells within the endothelial line spaces. 3 specimens out of 56 [4 sides for each specimen] (5.4%) took up Pan CK stain indicating positive vascular invasion. Correlation of the vascular invasion with the tumor depth and neck node status was done. CD 34 and Pan CK were found to be good markers to study vascular invasion and can be used along with H and E stains for better histopathological analysis.

S. No. 4

The Importance of Lymph Node Ratio (LNR) in Patients with Oral Squamous Cell Carcinoma

Dr. Pavan R. Dorle

SDM College of Dental Science and Hospital

Abstract

This study investigates the importance of LNR for locoregional recurrence in patients with OSCC. LNR is defined as the ratio of pathologically positive lymph nodes out of the total number of retrieved lymph nodes after neck dissection. The aim is to investigate the importance of LNR for locoregional recurrence in patients with OSCC. The present retrospective case–control type of study was carried out by collecting clinicopathological and follow up details of 117 OSCC cases treated from 2011 to 2019 at SDM Craniofacial surgery. Patients who have undergone modified radical neck dissection (MRND) for OSCC with or without adjunct radiochemotherapy were considered for the study. Cut off value of LNR% obtained through ROC (RECEIVER OPERATING CURVE) is 4.5%. According to this research patients with an LNR above 4.5% had higher risk of recurrence than patients with an LNR under the cut-off value. LNR is an independent reliable prognostic indicator for patients with Oral squamous cell carcinomas. LNR is superior and beyond conventional staging systems in predicting locoregional recurrence.

S. No. 5

Leiomyosarcoma in the Left side Mandible

Dr. Vivek. D. Menon

Saveetha Dental College

Abstract

Leiomyosarcoma (LMS) is a malignancy which very rarely occurs in maxillofacial location, and the course of the disease is not very characteristic. In this case report, we present a 67 year-old male patient with a painless tumor of the right angle of the mandible causing slight asymmetry of the face from past 30 days. On the basis of clinical tests, histopathological examination, and imaging, the patient was diagnosed with primary malignant leiomyosarcoma (LMS) of the mandibular angle on the right side. The patient received combined surgical and oncological treatment. The first stage was a

surgery, and then adjuvant radiotherapy was applied on the site of the resected tumor. The patient's postoperative course was uneventful. He also underwent adjuvant therapy well. In the period of 2-year follow-up, no signs of recurrence were observed. The findings may extend our knowledge and experiences in the treatment of leiomyosarcoma in the craniofacial area.

Keywords Adjuvant radiotherapy, Surgery, Leiomyosarcoma, Mandible, Mouth

S. No. 6

Chronic Cheek Bite in Buccal Mucosa: A Search for Dysplastic Changes

Dr. Paridhi Gaur

Rishiraj College of Dental Sciences and Research Centre

Abstract

Traumatic lesions in a retromolar region of oral cavity are commonly seen secondary to cheek biting. This usually occurs when buccal mucosa accidentally gets traumatized due to molar teeth while chewing, biting and miscellaneous reasons (sharp teeth, pericoronitis, faulty restorations and buccally erupted teeth). When such lesions become chronic it is well documented in literature that they carry mild to moderate risk of dysplastic changes. On this basis a study was done in our institute in which thirty random patients who were continuously suffering from chronic cheek biting were included. All these patients didn't have any obnoxious habits like tobacco chewing, smoking, alcoholism and others. According to size of lesions incisional or excisional biopsy was done under local anaesthesia and was sent for histopathological analysis. Out of these thirty patients acanthosis along with hyperchromatic nuclei were most common finding. Two patients had moderate dysplastic features while one patient had mild dysplasia. The results were statistically significant. Hence we conclude that such lesions should be kept under observation, surgical removal of third molars should be done as required and chronic oblique suspicious lesions should be excised in those patients also who do not have any obnoxious habits. However considering a concise sample size further study should be done with larger sample size.

S. No. 7

Relevance of Depth of Invasion (DOI) of Squamous Cell Carcinoma of Gingivobuccal Sulcus (Primary) and Correlation with Neck Node Metastasis

Dr. Akshay A. Byadgi

SDM College of Dental Sciences and Hospital Dharwad

Abstract

Prospective study to assess the histopathological depth of invasion (DOI) of gingivobuccal carcinoma with the use of preoperative ultrasonography and computed tomography and Compare the preoperative measurements obtained from ultrasonography and computer tomography with DOI measured in the primary tumor, and to correlate the histopathological depth of the resected specimen with the level of cervical node involvement (metastasised). Prospective study with Sample size 50 where All patients underwent procedure for wide resection of the lesion with neck dissection and reconstruction using

regional or vascularized free flap under general anaesthesia. Preoperatively ultrasonography and CT scan of lesion and neck and post operatively histopathological examination of resected specimen for (DOI). From the study it was found that histopathological examination of tumor thickness is still the gold standard as compared to pre operative measurement using USG and CT scan. There is an extremely significant correlation between the microscopic tumor thickness and the occurrence of nodal metastasis, with increasing rate of nodal involvement seen with thickness ≤ 4 mm. Extra capsular spread beyond the node capsule was the most significant predictor of both regional recurrence and development of distant metastasis, and it accounted for decreased survival in patients.

S. No. 8

Radiolucent Lesion in the Body of Mandible: A Diagnostic Dilemma and Clinical Perspective

Dr. Mehul Shashikant Hirani

Faculty of Dental Sciences, IMS, BHU, Varanasi

Abstract

Diagnosis of patient presenting with radiographic radiolucent lesion over angle-body region of mandible is frequently perplexing. Primary manifestation of vague bony pathology in the oral cavity may pose a diagnostic challenge and may alter treatment outcome. A 61-year-old woman presented with a 1-year history of slow-growing swelling over her left lower mandibular region. OPG revealed an oval radiolucent lesion in the left body of mandible. Aspiration was negative. Histopathological diagnosis came as chronic inflammatory lesion after an incisional biopsy. A subsequent CT scan revealed a hypointensified lytic lesion extending from the left body to angle mandible, alongwith many minor lytic lesions over the ramus, zygoma, and cranial vault, indicating an unknown underlying pathogenic etiology. Based on imaging findings of extensive bony lesions differential diagnosis of Multiple myeloma was made and was confirmed by bone marrow biopsy, immunoprofile and presence of monoclonal band on serum electrophoresis. Subsequently, patient was referred to Medical Oncology Department for chemotherapy. Awareness of the maxillofacial manifestations of multiple myeloma is important for early detection of the disease, especially in cases with initial intraoral involvement that could be the first indication of disease. The patient was relatively asymptomatic and was only concerned about the lesion in jaw. Initial working diagnosis could be elusive. Atypical disease presentation complicates diagnosis, potentially leading to misdiagnosis or delays in diagnosis, both of which could jeopardize the final treatment plan. This case report emphasizes the importance of clinicians thoroughly inspecting oral cavity for suspicious lesions that could indicate serious underlying disease. Clinicians must be attentive to the oral manifestations of underlying disease, have a high index of suspicion, and refer promptly to increase chances of a favourable outcome.

S. No. 9

Case Report: Conservative Approach in Squamous Cell Carcinoma of Base of Tongue and Larynx

Dr. Nadiyapara Priyesh Prafulbhai

Vyas Dental College and Hospital

Abstract

A recent reduction in the number of smoke-related tumours has been observed thanks to the diffusion of anti-tobacco campaigns carried out in our country. Nevertheless, as demonstrated by recent global epidemiologic studies, squamous cell carcinoma of the mobile tongue appears to be progressively increasing in incidence, particularly among adults. The driving mechanism responsible for such changes is still to be precisely defined. Tongue squamous cell carcinomas in adults have been historically considered as particularly aggressive clinical entities, with a high risk of loco-regional relapse, survival rates inferior to those of the general head and neck cancer group and need for a more aggressive therapy. The larynx plays a key role for many essential functions, including breathing, voice production, airway protection, and swallowing. The goals of laryngeal cancer treatment are thus to provide best possible oncologic control, while optimizing functional outcomes. The treatment paradigm for advanced laryngeal cancer is one of primary surgery (total laryngectomy) which is gold standard. However, concerns have emerged regarding functional outcomes, as well as possible decreased overall survival in patients with laryngeal cancer. We present a case of 35 year old male with history of smoking and alcoholism complains of non healing ulcers in the base of tongue and pain in the neck region. On CT imaging it revealed ulcerproliferative heterogeneously enhancing soft tissue attenuating lesion along the base of tongue. Biopsy and immunohistochemistry was performed which revealed an squamous cell carcinoma of base of tongue and larynx. Total glossectomy and supraglottic laryngectomy was performed with immediate reconstruction using pectoralis major myocutaneous flap.

S. No. 10**Preoperative Neutrophil Lymphocyte Ratio: A Prognostic Marker for Early Relapse in Oral Squamous Cell Carcinoma**

Dr. Divya B. Kotian

SDM College of Dental Sciences and Hospital

Abstract

Squamous cell carcinoma accounts for 90% of all the oral malignancies. Even though there has been rise in the survival rate of patients diagnosed with oral cancer, it is still considered to be a life threatening disease to the human health. The various prognostic factor include the primary tumour size, lymph node involvement, extracapsular and perineural involvement along with distant metastasis. However, in the recent year there has been rising interest in using hematological markers as a prognostic factors. Neutrophils are said to regulate microenvironment of tumour and said to play a role in metastasis and proliferation of cancer cells whereas the lymphocytes are said to surveil the immune system of the tumours. Thus the neutrophil–lymphocyte ratio (NLR) could be used as a parameter for assessing the relapse and prognosis of the patient. The aim is to investigate the prognostic value of NLR in early relapse rate of the patient with oral squamous cell carcinoma. Pretreatment neutrophil and lymphocyte count and their ratio were retrospectively investigated for correlation with the overall survival. Patients who completed their chemo/radiation therapy and had completed followup period were included for the survival and relapse analysis. Patients with high neutrophil count and low lymphocytes had shorter survival rate. Peripheral blood cell count is a quick and easy assay to perform. Measurement of the NLR may be useful as clinical biological marker to predict prognosis in patients who are diagnosed with oral squamous cell carcinoma.

S. No. 11**Mucoepidermoid Carcinoma of Palate Mimicking Ameloblastoma A Rare Case Report**

Dr. Shreya Jeetendra Raut, Dr. Lakshmi Shetty

Dr. D.Y. Patil Dental College and Hospital, Pimpri, Pune

Abstract

Mucoepidermoid carcinoma is rare type of neoplasm that has sparked a lot of contestation and clinical interest. It is the most common malignant tumor of salivary glands with extremely diversified biological behavior. The aim and objective is to report a rare case of a mucoepidermoid carcinoma of palate mimicking ameloblastoma. Patient 28 years old female reported with complaint of pain and swelling in upper left back region of the jaw since 3 months. Patient gave the history of similar swelling in 2012. The discharge summary revealed infected lesion and enucleation, curettage was done under L.A. Patient developed intraoral swelling on the left palatal region 6 years back for which she did not take any treatment. Incisional biopsy reported ameloblastoma. C.B.C.T. revealed a radiopacity extending over a wide area, ranging from the left maxilla to the maxillary sinus. C.T. scan revealed ill-defined isodense lobulated expansile lytic lesion. The partial maxillectomy was done under G.A. and the maxilla partially resected. Histopathological examination reported invasive low grade mucoepidermoid carcinoma. Postoperatively the MRI and C.T. scan was done revealing no recurrence. The obturator has been given and patient is kept on regular follow-ups. Normally, these tumors grow slowly.¹ Histological onset has been suggested to involve neoplastic changes in the lining epithelium of an odontogenic cyst. 2 Patient gave the history of similar lesion, possibility that microinvasion would be possible cause of developing into mucoepidermoid carcinoma. Clinicians and pathologists encounter this lesion once in their lifetime, hence evidence-based approach and long-term follow-ups are crucial for early diagnosis improving the overall treatment modality.¹

S. No. 12**Audit of Surgical Margins in Head and Neck Cancer: Current Techniques and Future Directions**

Dr. Rica Singh

Manipal College of Dental Sciences, Mangalore

Abstract

Non-communicable diseases are now responsible for the majority of global deaths, and cancer is expected to rank as the leading cause of death and the single most important barrier to increasing life expectancy in every country of the world in the twenty-first century. Recurrences occur in up to 2/3rd of patients with oral cancer. These are often detected late given the fact that patients have been extensively pre-treated and identifying recurrences in this setting is difficult. Moreover, these recurrences consist of resistant clones of cells that have escaped treatment, with a detrimental effect on outcomes. The literature was searched using PubMed, Scopus, Cochrane database of systematic reviews databases employing the following keywords: “surgical margins in head and neck cancer”, “oral squamous cell carcinoma”, “oncogenes”, “tumor suppressor genes”, “molecular margins”, “non-cancerous lesion of head and neck”. Only randomized controlled trials, in-vitro, in-vivo studies, clinical

studies, in silico studies, and reviews were considered. This data shows us how important the surgical margins are, and also proves the status of surgical margins as an important predictor for overall outcome in oral cancer as well as other non-cancerous lesions. In order to prevent a recurrence, the surgeon must consider maintaining safety margins for tumor resection in primary surgery itself. Advances in light spectroscopy, endoscopy, imaging, biochemical alterations of tissue, molecular markers, and epigenetic alterations, allow applications in assessing the status of surgical margins. Methods for early detection, molecular assessment of margins and surgical guidance, and assessment of treatment response are instrumental to changing the rate of local recurrence and resultant reduced prognosis in patients with HNSCC by enabling personalized medicine. Furthermore, optical and molecular imaging techniques can be used to identify molecular changes in biomarker expression, enabling immediate intraoperative decisions on the extent of lesion and margin status, reducing the need for repeat surgery and the risk of recurrence.

S. No. 13

Estimation of Salivary PH, Salivary Amylase in Pre and Post Operative Patients with Oral Cancer

Dr. Sherin Salim Shah

Yenepoya Dental College

Abstract

Oral cancer is the sixth most prevalent cancer worldwide. In the Indian subcontinent, it ranks among the three most common types of cancer. The history of oral cancer shows that it is preceded in more than 70% of the patients by a recognized premalignant lesion and intervention at this stage may result in regression of the lesion. Aim of the study is to compare oral salivary pH and oral salivary amylase, in saliva pre and post operatively in cancer patients. The study was conducted on 24 patients who were histologically confirmed with oral squamous cell carcinoma. The patients saliva was collected one day before the surgery and three days after the surgery. Estimation of Salivary pH: by digital pH meter. Estimation of Salivary amylase: colorimeter method, with 3,5-dinitrosalicylic acid (DNS) reagent. Significant variation in pH and salivary amylase was noted in the salivary composition pre and post surgery to conclude, these parameters can be an area of further research with an increased sample size, which in turn may help opening the doors for new dimension in non invasive prognostic markers.

Category: Pathology

S. No. 1

Telangiectactic Granuloma: Rare Case Report of a Mentally Challenged Patient

Dr. Shriya Shrirang Ginde

Dr. D.Y. Patil Dental College and Hospital, Pimpri, Pune

Abstract

Introduction

Oral telangiectactic granulomas are typically benign, hyperplastic lesions occurring in response to trauma, irritations in the oral cavities which need careful handling due to bleeding tendencies.

Aim and Objectives

To discuss rare case of a mentally challenged patient who reported with pain and swelling in lower left back jaw region, its management, and briefly review related literature.

Materials and Methods

A 26 year old mentally challenged male patient, reported with swelling in the lower left back jaw region and was planned for extraction under general anaesthesia, of the affected tooth, and other carious teeth and excisional biopsy of associated lesion.

Result

Biopsy report revealed telangiectactic granuloma.

Discussion

Oral telangiectactic granulomas are reactive lesions occurring due to low grade infections, irritations, or trauma.² These lesions are highly vascular and need careful management. Haemangiomas, peripheral ossifying granuloma, malignancies, Syphilis, traumatic ulcer, lymphangiomas³ are various differential diagnosis with similar clinical presentations.

Conclusion

Mentally challenged patients always are high risk when are to be posted under general anaesthesia. The ability of such patients to tolerate dental treatments and cooperation is difficult, and hence are mostly treated under sedation or general anaesthesia.

References

1. Rathore A, Jadhav T. Oral telangiectactic granuloma with an intrabony defect. *J Indian Soc Periodontol* 2015;19(6):705–08
2. Venkatasubramanyam A, Hegde R, Sigtia S, Muglikar S, Shourie V. Laser assisted management of telangiectactic granuloma in third trimester of pregnancy-A case report. *J Clinical Diagn Res* 2018;12:7–8

S. No. 2

OKC Mimicking Dentigerous Cyst

Dr. John P. Mammen

Health sector

Abstract

Introduction

The odontogenic keratocyst (OKC) is a developmental odontogenic cyst with higher recurrence rate. It is the commonest keratinising cyst in the jaws with a peak incidence between ages 20 and 30 years. The mandible is more commonly affected in comparison to the maxilla with the posterior mandible being the common site of occurrence. Occasionally OKC may envelop an unerupted tooth or entrap a tooth and prevent its eruption superficially producing a radiographic resemblance to a dentigerous cyst.

Case Report

A 65-year-old patient presented with swelling over the chin region which was slow and progressive in growth. The swelling extended from canine to canine in mandibular arch antero-posteriorly with mobility associated with the mentioned teeth. Upon clinical examination followed by an incisional biopsy a diagnosis of OKC in relation to anterior mandible was reached. Under aseptic conditions, patient underwent cyst enucleation, peripheral osteotomy and

chemical cauterization. Allogenic graft was then placed with titanium mesh for reconstruction. The post-operative biopsy suggestive dentigerous cyst. Patient was discharged in an uneventful condition on a regular follow up basis.

Clinical Significance

OKC is a highly recurrent cyst that extends in the anteroposterior direction which is the reason for its camouflaging nature. In the above-mentioned case, a dentigerous cyst mimicked an odontogenic Keratocyst. Hence careful examination followed by a sound diagnosis can help prevent functional disfigurement.

S. No. 3

Ameloblastoma: Our Experience

Dr. K. Raveendharan

Tagore Dental College and Hospital

Abstract

Ameloblastoma, a benign epithelial odontogenic tumor, is locally aggressive. This tumor comprises about 1% of tumors and cysts arising in the jaws. It appears most commonly in the third to fifth decades and with equal frequency between sexes. Ameloblastoma prevalently occurs in the mandibular molar and the ramus areas. Recurrence frequently appears after inadequate treatment. In most cases, an ameloblastoma is usually asymptomatic and may be detected during the course of routine radiographic examination. Radiographically, it may have a unilocular or multilocular appearance, which is usually well defined and have corticated margin in the mandible whereas ill-defined in case of maxilla. Very often the diagnosis of ameloblastoma is made on the basis of radiographic features, however one should never rely on it alone. Combination of radiographic evaluation and histopathological examination should be done to provide a correct diagnosis. They are usually benign in growth pattern but frequently invade locally and occasionally metastasize. The Surgical treatment option for ameloblastoma includes resection of the tumor alone, resection of the jaw, enucleation. In this case series, we report 3 cases of ameloblastoma of the mandible with its clinical, radiological, histological features and various treatment modalities.

Comprehensive Management of Ameloblastic Transformation of Dentigerous Cyst: A Case Report of Rare Entity

Dr. Gaurav Gupta

ADC (R&R)

Abstract

Introduction

Among the odontogenic cysts, neoplastic transformation is highest in dentigerous cyst and odontogenic keratocyst. The lining of dentigerous cyst shows a potential for neoplastic transformation to ameloblastoma, squamous cell carcinoma, and mucoepidermoid carcinoma. Till date, very few cases of ameloblastoma arising in the wall of dentigerous cyst have been reported.

Materials and Method

A 25 years old male referred to our Centre, with complain of progressively enlarging non-tender swelling in the left side of upper jaw,

since past 6 months. H/o dentigerous cyst i.r.t impacted 37 since 2006, underwent marsupialization. After 12 years patient reported with recurrence of lesion and HPE report suggestive of ameloblastic changes in a dentigerous cyst wall. NCCT showed large osteolytic lesion involving body, angle and ramus of mandible. Owing to the recurrent nature of lesion, two stage surgery was planned for the patient. He first underwent hemi mandibulectomy with disarticulation and with reconstruction using Titanium recon plate with condylar analog. In second stage surgery, removal of Titanium recon plate followed by placement of patient specific implant (PSI) with implant analogues (custom made Ti implant with UHMWPE fossa component) was carried out. Advantage of PSI—No donor site morbidity, fast recovery, improved cosmetic and functional output. Although ameloblastic transformation of odontogenic cyst is rare but it can lead to extensive damage to bone tissue. A regular follow up and histopathological examination of whole specimen with multiple sectioning is very important. PSI obviates the need for any additional surgical procedure with more predictable treatment option and lesser morbidity.

S. No. 4

Mucormycosis Post Covid 19: A Threat of the Pandemic

Dr. Jehan Koshy Jacob

DAPM RV Dental College

Abstract

Introduction

Mucormycosis, a fungal infection caused by ubiquitous environmental molds, such as *Rhizopus arrhizus*, *Rhizomucor pusillus*, *Apophysomyces variabilis* and *Lichtheimia corymbifera*, is surging as COVID-19-associated infection at unprecedented rates throughout India and raising alarm bells around the world. The importance of mucormycosis has grown in recent years, as the number of patients has increased drastically. Herein we present a case of mucormycosis of the maxilla post covid 19 in a 39 year old otherwise healthy male patient with no comorbidities. Mucormycosis is the most common invasive fungal infection after aspergillosis and candidiasis. It is caused by molds belonging to the order Mucorales, which are commonly found in the soil, on plant surfaces, decaying fruits, vegetables and animal manure. Most mucor molds are incapable of infecting humans because they do not grow at body temperature. However, thermotolerant species, such as those isolated from COVID-19-associated mucormycosis cases in India, can cause opportunistic infection.

Conclusion

As Scientists continue to dissect the complex causes of this mucormycosis epidemic, it is becoming clear that, true to the opportunistic nature of these fungi, mucor molds took full advantage when host defences were down and the world was distracted by a pandemic. As clinicians were triaging massive covid19 outbreaks, steroids were prescribed in quantities and for durations that far exceed World Health Organization (WHO) recommendations, likely compromising patients' immune systems, increasing blood sugar levels and leaving patients, with and without underlying diabetic conditions, more susceptible to fungal invasion.

S. No. 5 Unravelling the Face: Exploring the Horizon

Dr. Akilan Pg-3rd Year Guided By Sr. Prof. Dr. Virender Singh

Post Graduate Institute of Dental Sciences, Rohtak

Abstract

Background

As an oral and maxillofacial surgeon having master degree in dental sciences, the scope of surgery is limitless in the field of oral cavity, maxillomandibular region and face in whole. It includes vast array of diagnosis and management of different conditions of oral and maxillofacial region including pathological presentation, traumatic injuries, salivary gland diseases, TM joint disorders, dentofacial deformities etc. As oral and maxillofacial surgeons have skills in the area of management of traumatic injuries to the skeletal framework i.e. hard tissue part of the Orbit, we can develop a better expertise in management of pathologies in close association with them even though it overlaps with field of ophthalmic and oculoplastic Surgeons. Herein we intend to share a case series of such, managed by us in our center.

Aim

To present a case series of patients having pathology in orbital cavity treated by Oral and Maxillofacial Surgeons.

Design

A case series.

Method

We discuss here about a case series of four patients who came with different kind of pathological presentation within the orbital cavity. These patients have been treated and managed by us in our institute as separate individual procedures.

Conclusion

Even though as Maxillofacial Surgeons we can treat complex Orbital trauma, we have shared here the ray of our efficiency to explore the horizons over pathology in the orbital cavity that has been treated by us. Hence as Oral and Maxillofacial Surgeons the knowledge and skills doesn't limit to only Teeth, Oral cavity, Jaws, Glands but as name implies, Oral and Maxillofacial region as whole.

S. No. 6 Tackling Unicystic Ameloblastoma: A Case Report

Dr. Sohini Dasgupta

A.B. Shetty Memorial Institute of Dental Sciences

Abstract

Introduction

Ameloblastoma is a true neoplasm of odontogenic epithelial origin. It is the second most common odontogenic neoplasm, and only odontoma outnumbers it in reported frequency of occurrence, with strong predilection for the posterior region of the mandible. Unicystic ameloblastoma refers to those cystic lesions that show clinical, radiographic, or gross features of a cyst, but on histologic examination show a typical ameloblastomatous epithelium lining part of the cyst cavity, with or without luminal and/or mural tumor growth. Various forms of ameloblastomas have various treatment modalities ranging from a conservative approach to surgical resection with reconstruction. Recurrence of unicystic ameloblastoma may be long

delayed, and a long-term postoperative follow up is essential for proper management of these patients.

Case Report

We report a case of unicystic ameloblastoma with mural proliferation in a 17-year-old girl, who presented with a swelling in the lower left jaw associated with dull aching pain and was managed initially by a conservative approach followed by surgical enucleation on recurrence.

Conclusion

This report shows that conservative treatment is not enough for the treatment of unicystic ameloblastoma with mural proliferation and that resection of the entire tumour along with uninvolved bony margins is required. Compared to the other variants of ameloblastoma, unicystic ameloblastomas with mural proliferation should be treated more aggressively owing to their high recurrence rate. A close follow-up and post surgical radiographic examinations should be performed at frequent intervals for early detection of recurrence.

S. No. 7 Use of Cyanoacrylate for Control and Excision of AVM

Dr. Niveditha N.

Bangalore Institute of Dental Science

Abstract

Background

Arteriovenous malformations (AVMs) are uncommon errors of vascular morphogenesis. Approximately 50% of AVMs are located in the craniofacial region. Subtotal excision or proximal ligation of the feeding vessel frequently results in rapid progression of the AVMs. Intralesional embolization is one of the useful methods for the treatment of AVM. The rate of eradication is low after embolization alone (5–10%). However, reducing the size and diminishing the anomalous flow of vascular malformation contribute to increases cure by surgical intervention or radiosurgery. N-butyl cyanoacrylate is commonly used to treat AVM. It is opacified with oily contrast medium and is effective in controlling bleeding and localizing VMs during resection. Hence, the correct treatment consists of highly selective embolisation (super-selective) followed by complete excision.

Objective

To embolize low flow venous malformation in an Arteriovenous Malformation.

Description

We present 3 patients (mean age, 46 years; range 25–67 years) with AVMs who underwent ECA control and intralesional embolisation with N-butyl cyanoacrylate followed by complete debulking of the solidified venous pool at our hospital. The microcatheter was navigated into the nidus and a diluted mixture of NBCA was injected very slowly.

Conclusion

We believe this technique is very useful and effective method for the treatment of arteriovenous malformations as it devascularizes to minimize blood loss during surgery and helps in debulking the lesion. However, considerable experience in this technique should be required.

S. No. 8**A Study of Early Detection of Cystic Changes in Impacted Lower Third Molars***Dr. Sruthi T. S.**Mes Dental College***Abstract****Background**

The follicular tissue around impacted third molars has a potential to develop pathosis. Radiographic pathology is usually defined as a pericoronal radiolucency measuring about 2.5 mm or larger in any dimension.

Aim

1. Histopathological evaluation for a radiographically normal dental follicle associated with impacted mandibular third molar.
2. To assess the correlation of cystic changes with depth of impaction and angular position of the impacted tooth.

Methods

A cross-sectional study was done on 80 patients with radiographically normal (pericoronal radiolucency < 2.5 mm) impacted mandibular third molar. The follicle tissue surrounding the impacted tooth was given for histopathologic analysis after surgical removal of the tooth.

Result

Cystic changes was found in 18.7% of cases out of 80 follicular tissue sent for histopathologic evaluation. Odontogenic keratocystic and dentigerous cystic changes were found in 6.6% cases.

Conclusion

Clinical and radiographic features alone may not be a reliable indicator of absence of pathology. For better treatment outcome and to prevent future morbidity, the clinician may treat all impacted third molars with caution.

References

1. Doria G, Rajpura, Mehta DN, Mehta R, Ashem A. Histopathological Study of Pericoronal Tissue and Radiological Evaluation of Various Position of Impacted Mandibular Third Molar. *European Journal of Molecular & Clinical Medicine* ISSN 2515–8260 Volume 07, Issue 10, 2020.
2. Masdoose SMH, Nasher AT, El-Zine MA, Al-Akwa AAY, Al-Shamahy HA, Al-labani MA. Histologic and radiographic study of pathologic change in complete impacted third molars dental follicles. *Universal Journal of Pharmaceutical Research* 2021; 6(1):43–48

S. No. 9**Best of Both Worlds: Marsupialization and Enucleation***Dr. Darpan Kaur**SGT Dental College, Hospital and Research Institute***Abstract**

The OKC is considered as one of the most interesting jaw cysts. Philpsen coined the term ‘Odontogenic Keratocyst’ in 1956. The name ‘keratocyst’ is derived from its cystic epithelium that produces so much keratin that it fills the cystic lumen. In 1967, Toller argued that the OKC should be regarded as a benign cystic neoplasm.

However, whether these are developmental or neoplastic, is still debatable. Histopathologically and behaviourally, the odontogenic keratocyst is a very unique entity. It shows characteristics of both a cyst as well as a tumour making it the most aggressive and recurrent of all odontogenic cysts. The OKC doesn’t usually affect the nerve sensation, it does however frequently displace the inferior alveolar neurovascular bundle to the inferior border. The resorbed bone includes the cortex and the inferior border of mandible but at a rate slower than that of the intermedullary trabecular bone, which is less dense. Due to this, the tumour extends in an anteroposterior direction than a buccolingual one. The general approach to treating Odontogenic Keratocyst is enucleation and curettage. Alternative therapies of marsupialization and resection albeit valid, have specific limited indications. Here, I present a case of a large Odontogenic Keratocyst in a 21 year old female patient, that reported to the Department of Oral and Maxillofacial Surgery at SGT Dental College and Hospital, and the treatment plan that followed for 1 year.

Keywords Odontogenic, Keratocyst, Enucleation, Curettage, Marsupialization

References

1. Shafer’s Textbook of Oral Pathology—Seventh Edition
2. Oral and Maxillofacial Pathology. A Rationale for Diagnosis and Treatment Second Edition Robert E. Marx and Diane Stern

A Case Report of Osteochondroma of TMJ*Dr. Shailesh Menat, Dr. Anil Managutti**Narsinhbhai Patel Dental College, Visnagar, Gujarat***Abstract**

Osteochondroma (OC), or osteo-cartilaginous exostosis, is the most common bone neoplasm and represents 20–50% of benign bone tumors and 10% of all skeleton tumors. It contains a cortical and medullary bone with a cap above the hyaline cartilage and shows continuity of the cortex and medulla of the adjacent bone. OC is often found in long bones due to endochondral growth. OCs are rare in the craniofacial region (0.6%). Less than 300 cases have been reported so far. When this happens, the condyle and the coronoid process are the areas most often affected. The most common clinical representation of patients with OC of the mandibular condyle is mandibular asymmetry due to a vertical elongation of the face on the affected side, malocclusion with cross-bite on the contralateral side, and lateral open bite on the affected side and slight pain. With same above-mentioned clinical findings, a 54-year-old male patient reported to our department. In this scientific paper we will discuss in detail about the case, with its required management.

Reference

1. Ramos-Murguialday M, Morey-Mas MÁ, Janeiro-Barrera S, García-Sánchez A, Molina-Barraguer I, Iriarte-Ortabe JI. Osteochondroma of the temporomandibular joint: report of 2 cases emphasizing the importance of personalizing the surgical treatment. *Oral surgery, oral medicine, oral pathology and oral radiology.* 2012 Mar 1;113(3):e41–7.

Osteblastoma: A Unusual Projection

Dr. M. Veeramuthu

Adhiparasakthi Dental College and Hospital

Abstract

Osteblastoma is an uncommon osteoblastic tumor that rarely involves facial bones. It is an uncommon lesion that accounts for 1% of all bone tumors and about 3% of all benign bone tumors. Here, we present a case of 35-year-old female with benign osteblastoma on the right side of the mandible. Clinical presentation, radiologic and histologic features, and treatment and follow-up of this patient are discussed in this paper. Proper diagnosis of this lesion is very important because of its similarity to others lesions. There are very few reported cases of this rare entity; the primary aim of this paper is to add more cases of this rare phenomenon to literature and provide a descriptive review.

S. No. 10

Comprehensive Management Report of a Case of Post Covid-19 Scedosporium Apiospermum induced Osteomyelitis of the Jaw: Holistic Approach to the Rare Clinical Entity

Dr. Maj Sabareesh Jakka

Armed Forces Medical College, Pune

Abstract

Aim

The aim of this poster is to present the early identification and management protocol followed in a case of Scedosporium Apiospermum induced osteomyelitis of the naso-maxillary region in a post COVID-19 patient.

Materials and Methods

This 63 year old female reported with a chief complaint of swelling in the anterior alveolar and palatal mucosa, multiple mobile maxillary teeth with multiple draining sinuses associated with pus discharge. Haematological examination revealed increased Serum Ferritin, C-reactive protein levels with neutropenia. Pathological examination revealed hyaline septate hyphae with acute angle branching in the background of inflammatory cells and necrotic debris. Culture was positive for *S. apiospermum* after 7 day of incubation period. Lactophenol cotton blue mount of slide culture showed clavate to ovoid conidia born on elongated, simple conidiospores laterally over hyphae. In the radiological evaluation, there was complete obliteration of the right maxillary sinus with necrotic changes in the alveolar process and maxilla on the right side. The patient was subsequently taken up for debridement, sequestrectomy and partial subtotal maxillectomy sparing the palatal mucosa under GA.

Results

The institutional protocol based on documented literature to attain standardisation in the management along with early detection of the causative organism aided in the early intervention and prevention of deterioration of the symptoms and further spread of the disease. Presently, the patient is on interim obturator and is being planned for prosthodontic rehabilitation with zygomatic implants.

Conclusion

Several cases of fungal infections have been reported during the second wave of COVID-19 like Aspergillosis, Mucormycosis and Candidiasis. Scedosporium apiospermum is a rare entity which is

characterised by mycetoma, pulmonary infection and central nervous infections and to be associated with post-COVID fungal osteomyelitis. Hence, timely and correct identification of Scedosporium rhino sinusitis is necessary for successful management of the infection.

S. No. 11

Odontogenic Space Infection an Indicator for Compromised Health Status

Dr. Arrvinthan Su

Tagore Dental College

Abstract

Infections of the maxillofacial region are of great significance to general dentists and maxillofacial surgeons. They are of clinical importance as they are commonly encountered, and are also challenging as timely intervention is needed to prevent fatal complications. The infections arising from the tooth are initially confined to the alveolar bone and surrounding periosteum. They spread along the path of the least resistance to the cortical plates. Once the infection penetrates the cortical plates, they reach the muscle plane. Once, the periosteum is breached, infections reach the soft tissue planes, the fascia. Most of the infections are confined to a particular space and the surrounding fascia. Many etiological factors form the base for the infections of deep spaces, dental caries, extraction of infected, non-infected tooth maxillary sinusitis, tonsillitis, maxillary sinus fracture, temporomandibular arthroscopy, drug-induced infections. Medically compromised situations, present with a challenge to equally manage the systemic health status and local presenting conditions in a balanced manner without causing a flare-up of their systemic conditions. This paper mainly focuses on the occurrence of odontogenic infection in medically compromised individuals and it may be an indicator for worsening of the systemic health status of an individual and also share our experience with such cases.

Keywords Odontogenic infection, Medically compromised, Head and neck space

S. No. 12

Cryotherapy for Management of Oral Lesions

Dr. Subhiramaniyan T.

Thaimoogambigai Dental College

Abstract

Introduction

Cryotherapy is a therapeutic method of applying cryogens like liquid nitrogen at lower temperature in order to induce irreversible damage to the tissue. Its application in treatment of various oral lesions are less invasive and promote uneventful healing. In this study benign oral lesions are treated with cryosurgery.

Aim and Objectives

Aim of this paper presentation is to discuss about the management of various benign oral lesions (Leukoplakia, Lichenplanus, Mucocele, Pyogenic granuloma, Traumatic fibroma, etc..) using Cryotherapy and its outcomes.

Materials and Methods

30 Patients with any benign lesions in the oral cavity were treated with Cryotherapy (Cryogun). Patients evaluated at the end of 1st, 3rd, 7th and 21st post-op days. Both male and female patients were included in the study with no age limitations. Ethical committee approval was obtained.

Results

Lesions were most commonly seen in buccal mucosa followed by lip, tongue and palate. Treatment outcome like adequacy of healing and scarring were assessed and documented with the help of photographs during the 1st, 3rd, 7th, 21st day after procedure.

Discussion

From our study we inferred that lesions treated with cryotherapy had hyperaemia and oedema on first three post operative day, which subsided completely in 1 week time.

Conclusion

Cryotherapy appears to have promising role in locally aggressive and recurrent lesions in the oral cavity, less invasive form of therapy when compared to the conventional surgery.

References

1. Yu CH, Lin HP, Cheng SJ, Sun A, Chen HM. Cryotherapy for oral precancers and cancers. *J Formos Med Assoc.* 2014 May;113(5):272–7. <https://doi.org/10.1016/j.jfma.2014.01.014> Epub 2014 Feb 20. PMID: 24560447.
2. Asrani S, Reddy PB, Dhirawani RB, Jain S, Pathak S, Asati P. Cryosurgery: A Simple Tool to Address Oral Lesions. *Contemp Clin Dent.* 2018;9(Suppl 1):S17–S22. https://doi.org/10.4103/ccd.ccd_708_17

S. No. 13**Lymphoproliferative Disorder of the Parotid Gland: A Rare Entity**

Dr. Tejkiran Shetty

A. J. Institute of Dental Sciences

Abstract

Non Hodgkin lymphomas correspond to 25% of all head and neck cancers. These rare tumors only include less than 5% of malignant tumors in parotid region. Differential diagnosis of these tumors cover many malignant and benign tumors of the parotid gland. Definitive diagnosis depends on sufficient tissue material of parotidectomy specimen. Treatment modality is surgical removal of the lesion with or without additional radiation and chemotherapy depending on the stage of the tumor. Prognosis is better than other forms of the B-cell lymphoma. We report a case of a 75 year old man who suffered from progressively and slowly growing mass on parotid region, without any inflammatory disease or chronic infection, diagnosed with mucosa associated lymphoid tissue lymphoma of the parotid gland. Parotid gland was totally excised by superficial parotidectomy and patient is undergoing chemotherapy.

S. No. 14**Aneurysmal Bone Cyst of the Mandible: A Case Report**

Dr. Selvamalathi A.

A. J. Institute of Dental Sciences

Abstract

The Aneurysmal bonecyst is an osteolytic and locally destructive lesion that mainly affects the metaphyseal area of long bones with only 2% incidence in the maxillofacial skeleton. Surgical treatment such as curettage and resection is the most common therapy, however additional methods to improve or substitute surgical approaches has been described including arterial embolization, radiotherapy, sclerotherapy. This report discusses case of 12 year old female patient diagnosed with aneurysmal bone cyst of right side of mandible planned for combined therapeutic approach including percutaneous embolization and surgery.

S. No. 15**Post Covid 19 Mucormycosis: A Case Series**

Dr. Sijo Sam Mathews

Vydehi Institute of Dental Sciences and Research Centre

Abstract**Introduction**

Mucormycosis still remains a poorly understood disease with a high mortality rate. As the fungi responsible are typical environmental organisms, they are usually non-pathogenic in immunocompetent individuals. An unholy trinity of diabetes, rampant use of corticosteroids in back ground of COVID-19 appears to increase mucormycosis.

Aim

The aim of my paper is to present our experience in the treatment of Mucormycosis.

Materials and Method

Three cases of mucormycosis who were treated by the department of oral and maxillofacial surgery were included in this case series. All 3 patients were medically compromised and were diagnosed of covid 19 prior to being diagnosed of Mucormycosis. The patients were treated surgically by debridement and maxillectomy followed by medical management of Amphotericin B for a period of 21 days followed by posoconazole for period of 15 days.

Results

The patients showed completed regression of the disease after a period of 3 months and were advised for dental rehabilitation.

Post Covid Mucormycosis Involving the Mandible: A Case Report with Brief Note on Literature

Dr. Lokesh B.

Tagore Dental College and Hospital, Tamil Nadu

Abstract**Background**

Mucormycosis also termed as phycomycosis or zygomycosis is less commonly seen in oral cavity. But it is an invasive, life threatening and aggressive fungal infection. It mostly targets individual with altered immunological system and diabetes. In this recent pandemic situation, the individuals affected with COVID-19 are also affected with this fungal infection which commonly involves the maxilla. This presentation comprises a case report, a case of 45 year old female affected with mucormycosis in post covid scenario involving

mandible which is quite rare situation. The case report covers clinical findings, radiographic investigations, surgical treatment and histopathological details with brief on literature review.

Conclusion

Since mucormycosis is aggressive fungal infection it should be handled with multimodal approach to reduce the systemic damage of an individual, morbidity and mortality.

Versatility of Palatal Flaps in the Primary Closure of COVID Associated Mucormycosis–Maxillectomy Defects

Dr. Anish Poorna T., Dr. Joshna E. K.

Government Dental College, Kottayam

Abstract

Introduction

Primary closure of the maxillectomy defect after resection and aggressive debridement for COVID Associated Mucormycosis (CAM) plays an important role in the prevention of secondary infection before definitive reconstruction is done.

Aim

To evaluate the use of palatal flaps in the primary closure of maxillectomy defects, resected due to CAM of the rhinomaxillary region.

Materials and Methods

Patients who reported to our institution with CAM of the rhinomaxillary region were taken into the study, whereas those with advanced pulmonary and cerebral involvement were excluded. A total of ten patients with proven CAM of the rhinomaxillary region were treated with aggressive surgical debridement and resection of the involved maxilla followed by early antifungal medical therapy. Reconstruction of the defect was carried out as a secondary procedure. Eight patients fulfilled the inclusion criteria and consented to be a part of the study. These patients were followed up to look for the outcome till the time of discharge and by the end of the first month.

Results

Six patients had successful epithelialization and healing of the defect closed by palatal flap primarily whereas two patients had flap dehiscence in the first week which required re-suturing under local anaesthesia.

Conclusion

The preservation of soft tissue palatal flaps with careful handling of the vessels, thus maintaining viability, provides an excellent option at disposal for primary closure of the oro-nasal defects in the surgical management of COVID associated mucormycosis.

Endemic in a Pandemic: Challenges faced during Diagnosis, Treatment Plan and Surgical Execution of Mucormycosis Cases and the Arduous Task in the Rehabilitation

Dr. Prithvi S. Balepur

Abstract

In the middle of the Pandemic, Mucormycosis has evolved as an Endemic, which has caused Devastation in the Oro Facial Structures hampering Phonetics, Aesthetics, Deglutition and Mastication. This has crippled thousands of patients across the country and scarred them for life. This paper highlight the difficulties in pre-operative diagnosis of Mucormycosis, intra operative decision making, post-operative complications ranging from Nasal Regurgitation, Feeding Issues,

Airway issues, Toxicity of Amphotericin B and the long road towards arduous Rehabilitation. This paper is an Audit of more than 150 Maxillectomies and few Mandibulectomies done at Authorised Government Mucormycosis center. This paper also presents a road map towards Arduous Rehabilitation of these mutilated faces by a simple prosthesis to implant supported Prosthesis on a Reconstructed Jaw.

S. No. 16

Corseting the Venous Malformation: A Novel Technique

Dr. Chourasia Amodh Badriprasad

Bangalore Institute of Dental Sciences and Hospital, Bangalore

Abstract

Background

Vascular anomalies are a group of lesions derived from blood vessels and lymphatics presenting with varying histology and clinical behaviour. Most common vascular malformations present on the face are the venous malformations and lymphatic malformations. They can present at single or multiple anatomical sites such as neck, cheek, lips, eyelids, tongue, soft palate, floor of the mouth, and parapharyngeal space, and can be superficial or deep. Most commonly, patients complain of facial disfigurement, bleeding, ulcers, pain. Larger lesions cause significant morbidity such as difficulty in speaking, mastication, compromised of airway eventually leading to death. The surgical excision of small lesions and debulking of large lesions have been performed successfully in the past, with reasonable results. However, there are challenges in the management of patients with recurrent or life-threatening vascular malformations, as well as those with a history of failed treatments. Thus, the novel concept of corset suturing (aka intra-tumoral ligation) was introduced.

Objective

To present a case series of 25 patients with low flow venous malformations of the head and neck managed with corset suturing at BMJH.

Description

We describe and introduce intra-tumoral or corset suturing technique which was performed on 25 patients who were diagnosed with a low-flow venous vascular malformation in the Department of Oral and Maxillofacial Surgery at Bhagwan Mahaveer Jain Hospital, Bangalore (BMHJ).

Conclusion

Corset suturing was found to be a simple, aesthetic, and cost-effective method having excellent result in treating diffuse low-flow vascular malformations of the head and neck.

S. No. 17

Maxillofacial Surgeon's Dilemma of Management of Multi Disease Entity of The Jaws: Case Report

Dr. Sapna Patel

KLE VK Institute of Dental Science

Abstract

Oral and maxillofacial surgery deals with various disease entities in the head and neck region, this may lead to dilemma in the diagnosis

and management if they arise at the same time. Here we are presenting one case with multiple disease at same time. A patient named Mahesh, 28/M had reported to OPD with complaint of pain and swelling on right side of the lower jaw and inability to open mouth since 10 days, patient underwent septal defect closure surgery 1 month back and was on cardiac medications. There is no evidence in literature of simultaneous presentation of such Pathology, space infection and submucous fibrosis in a single medically compromised patient. This paper emphasizes on the need for proper history, clinical and radiological examination. Based on the findings a which an accurate diagnosis can be made and a proper treatment protocol may be established.

References

1. Fahad Khan et al., Diagnostic dilemma of periapical cemento-osseous dysplasia presenting as a multilocular mandibular radiolucency, *Dent Update* 2021; 48: 30–32.
2. Dr. Kiruba Shankar K et al., Odontogenic Keratocyst (OKC) of Maxilla—A Diagnostic Dilemma, (*IJDMSR*) ISSN: 2393-073X Volume 3, Issue 10 (October 2019), PP 01–03.

S. No. 18

An Insight into Surge of Covid Associated Mucormycosis: A Retrospective Analysis of 130 Cases

Dr. Vigneshwar S.

Government Dental College and Hospital, Vijayawada

Abstract

Introduction

Mucormycosis is an opportunistic fungal infection, there is a notable and significant increase in the incidence of mucormycosis in the backdrop of this covid 19 pandemic. Considering the high mortality rate and poor prognosis of the disease, we looked into the causative factors, various clinical manifestations and treatment modalities and we have analysed our experience of 130 cases to have a better understanding of the disease.

Aim

This presentation aims to discuss causes and risk factors, clinical findings and surgical management strategies.

Methodology

130 surgically treated cases of Rhino-Orbito-Cerebral-Mucormycosis (ROCM) at our institution with a history of recent COVID 19 infection were included. The clinical–epidemiological, possible risk factors and diagnostic factors were statistically analyzed along with post operative follow up of patients following Maxillectomy.

Result and Conclusion

It is evident from the study that there is a significant increase in incidence of ROCM in diabetic patients treated with corticosteroid for SARS-COV 2 patient. SARS-Cov-2 variant's interplay with the endothelium receptor, iron uptake, similarity between hepcidin and corona virus spike protein were found to be the triggering factors.

References

1. Jeong et al. The epidemiology and clinical manifestations of mucormycosis: systematic review and meta-analysis of case reports. *Clin Microbiol Infect.* 2019
2. Moorthy Aet al. SARS-CoV-2, uncontrolled diabetes and corticosteroids—an unholy trinity in invasive fungal infections of the maxillofacial region? A retrospective, multi-centric analysis. *J Maxillofac Oral Surg.* 2021

S. No. 19

Large Epidermoid Cyst of Floor of Mouth

Dr. Riddhi Mahalle

School of Dental Sciences, Krishna Institute of Medical Sciences, Maharashtra

Abstract

Introduction

Epidermoid cysts, also known as a sebaceous cysts, are encapsulated subepidermal nodules filled with keratin. Although most commonly located on the face, neck, and trunk, epidermoid cysts can form anywhere on the body. Sebaceous cysts are generally considered to be benign, however new evidence indicates that they can develop de novo malignancy.

Aims and Objectives

To report a case of large epidermoid cyst of neck in a 17 year old female.

Materials and Methods

After surgical fitness, the cyst was treated by surgical enucleation. Post operative pharyngocutaneous fistula was treated conservatively with regular dressings.

Results

At post OP 3 months the fistula had healed completely and there were no signs of recurrence. Patient was satisfied with the treatment. Function and esthetics were restored.

Discussion

Involvement of epidermoid cyst in face, neck, periauricular area, and upper trunk is more common but any part of the body including sites such as the nipple, genitalia, and palmoplantar area may be involved. Epidermoid cysts are an ovoid structure with a noninfiltrating rim. The superficial margin of the cyst usually touches the deep skin line, and the cyst is filled with mucoid attenuation material and scattered dystrophic calcifications. Uncommonly, they may become infected or rupture, causing a foreign body reaction. Although these cysts are recognized as benign lesions, rare malignancy can arise. Recurrence of epidermoid cyst is rare though it can grow significantly in size as in the current case. Surgical enucleation is the choice of treatment for large epidermoid cysts.

S. No. 20

Gorlin-Goltz Syndrome: A Case Report

Dr. Aysha Kaleem Pasha

K.V.G. Dental College and Hospital

Abstract

Gorlin-Goltz syndrome is a hereditary autosomal dominant disease with full penetrance and a wide range of expressivity. The maxillofacial odontogenic keratocyst (OKC) is a frequent developing odontogenic cyst. Gorlin-Goltz syndrome is a multisystem disease characterised by basal cell nevi, jaw keratocysts, and skeletal abnormalities. The maxillofacial odontogenic keratocyst (OKC) is a frequent developing odontogenic cyst. This trio is known to be linked with a variety of additional neurological, ophthalmic, endocrine, and genital symptoms. The condition is diagnosed using both major and minor criteria. This report represents a case of gorlin goltz syndrome 21 years old male patient who presented with a swelling on his right maxillary anterior and mandibular posterior region since 1 year.

Apart from this the patient gave a history of tuberculosis 4 years ago which diverted our attention to tuberculosis infection of cyst. On basis of clinical and radiological evaluation, Enucleation was planned in both the quadrants and histopathological report revealed OKCs. Patient was followed up for 1 month and is being followed up weekly. This case report highlights gorlin goltz syndrome in tuberculosis patient and its surgical management with literature review.

S. No. 21 Maxillary Osteomyelitis: A Rare Presentation: Case Report

Dr. Pradeep C.

Mahatma Gandhi Postgraduate Institute of Dental Sciences

Abstract

Osteomyelitis of the maxilla is now a rare event with the advent of antibiotics. In maxillofacial region mandible is more commonly involved as compared to maxilla. It continues to remain one of the most difficult to treat infections, the two predominant causes are odontogenic infections and sinusitis. Immunocompromised states such as diabetes, HIV, and malnutrition increase the risk of osteomyelitis. Progressive bony destruction and the formation of sequestra are hallmarks of osteomyelitis. I hereby present a rare case of osteomyelitis involving the maxilla in a 55 year old male diabetic. The patient was managed with sequestrectomy and debridement via intra oral approach, appropriate parenteral antibiotic therapy and glyceemic control. The patient had an uneventful recovery.

S. No. 22 Abdominal Dermal Fat Graft Versus Nasolabial Flap in Oral Submucous Fibrosis: A Randomised Clinical Trial

Dr. Jimmy Deepak Kania

Government Dental College and Hospital Ahmedabad

Abstract

The surgical management of oral submucous fibrosis (OSMF) includes intraoral release of fibrous bands and creating a raw area, usually covered by biological or non-biological materials. The abdominal dermal fat graft is easy to harvest, with sufficient bulk and is cosmetically better, while the nasolabial flap has good vascularity. This study compares the efficacy of abdominal dermal fat graft with nasolabial flap in OSMF.

Method

Comparative study comprising of 30 patients with Grade 3 and 4A OSMF, randomly divided into 2 groups: Group A (ADFG) and Group B (NLF). They were evaluated for mouth opening, graft uptake, time taken for mucosalization, pain and thickness of masseter muscle on ultrasonogram (USG) till 6 months.

Findings

At 6 months, the average mouth opening improved by 22.4 mm (20–24 mm) and 36.2 mm (32–37 mm) in Group A and Group B respectively and graft uptake was 80% in group A and 100% in group B which was clinically and statistically significant. Time taken for mucosalization was 11.87 ± 0.743 weeks for group A and 14.60 ± 0.986 weeks for group B which was statistically significantly better ($p < 0.05$) for group A. No statistical difference was

noted in pre and post operative pain and thickness of masseter muscle in both groups. Intraoral hair growth, facial scar and accentuation of the nasolabial fold was seen in Group B.

Conclusion

NLF holds better in terms of mouth opening and graft uptake as compared to ADFG in the management of OSMF.

S. No. 22 Acanthomatous Ameloblastoma: A Rare Case Report

Dr. Aasimah Hameed

SGT Dental College, Hospital and Research Institute

Abstract

One of the most frequently encountered epithelial Odontogenic benign tumor is Ameloblastoma and was described for the first time by Broca (1868). The literature reports Mandible as the most common site of this tumor accounting for approximately 80% of cases. Histologically, it is of six types—Follicular, Plexiform, Granular, Basal, Desmoplastic and Acanthomatous. Acanthomatous Ameloblastoma is considered as an aggressive and rare variant of Ameloblastoma. It is more commonly found in the mandible (81%) than the maxilla (19%). In the maxilla, the lesion is found most commonly in the molar area (47%), antrum and nasal floor (33%), however in canine area, it is quite rare (9%). The literature suggests that Acanthomatous Ameloblastoma is usually found in the geriatric population than in younger ones. I hereby present a rare case of Acanthomatous Ameloblastoma seen in anterior maxilla in a young adult male.

Keywords Acanthomatous, Ameloblastoma, case report, Odontogenic, Tumor.

References

1. Bansal M, Chaturvedi T P, Bansal R, Kumar M. Acanthomatous ameloblastoma of anterior maxilla. J Indian Soc Pedod Prev Dent[serial online] 2010[cited 2021Oct 27];28:209–11.
2. Small IA, Waldron CA. Ameloblastomas of the jaws. Oral Surg Oral Med Oral Pathol 1955;8:281–97.

Benign Mucosal Keratocyst of Buccal Mucosa: An Unusual Case Report

Dr. Joshna E. K., Dr. Anish Poorna T.

Government Dental College, Kottayam

Abstract

Introduction

Odontogenic keratocyst (OKC) is a distinct entity with specific clinical and histological features, usually involving the osseous regions of the maxillofacial region. The peripheral soft tissue counterpart of OKC is rare and very few cases have been reported in the literature. Here we present a case of benign mucosal keratocyst in the buccal mucosa.

Case report

A 56-year-old gentleman reporting an asymptomatic swelling over the right cheek for the past five years was examined to have a well-defined solitary, firm, non-tender swelling with no pulsations. Brown-colored fluid was obtained on aspiration. Ultrasonography revealed a

well-defined homogeneously hyperechoic focal lesion. A working diagnosis of lipoma and epidermoid cyst was made and the lesion was excised under general anesthesia followed by primary closure. Unanticipated, the histopathologic finding suggested benign soft tissue mucosal keratocyst. The patient was followed up for one year with no signs of recurrence or any other complications.

Discussion

The buccal mucosa is a rare site for the occurrence of mucosal keratocyst. Its occurrence at this location can be explained by displaced and persistent dental lamina rests in the buccal mucosa during odontogenesis in the embryo. The differential diagnosis for OKC of buccal mucosa includes epidermoid cyst, cutaneous keratocyst, trichilemmal cyst, and steatocystoma. We report this case to emphasize the need to consider benign mucosal keratocyst in the differential diagnosis when a similar presentation in the soft tissue of the oral cavity is noticed.

A Surgeon's Plight in the Management of Ameloblastoma of Mandible: Case Series

Dr. Ramesh Ram Fry

Maharishi Markandeshwar Collge of Dental Sciences and Research, Mullana-Ambala, Haryana

Abstract

Introduction

Ameloblastoma, formerly known as Adamantinoma is an odontogenic epithelial benign neoplasm principally of enamel—organ type tissue that has not undergone differentiation to the point of hard tissue formation. Ameloblastoma typically presents as an asymptomatic, painless slow-growing neoplasm with facial deformity. The surgical management of ameloblastoma has always remained a subject of controversy with special interest to the approach.

Aims and Objectives

- To rehabilitate the patient's form and function with the best possible approach.
- To assess the outcome or recurrence after radical/conservative management.

Materials and Methods

This study was conducted retrospectively, specially in the Northern Indian population within a time span of 5 years. Patients were followed up at different time intervals, data were collected and analysed.

Results

Although the neoplasm represent 1% of all jaw cysts and tumors but its aggressive nature has led to facial disfigurement and deformity thereby limiting the surgical excision which is a leading cause for recurrence. In the present study, patients were diagnosed, counseled for radical/conservative treatment and were followed on a regular basis to prevent recurrence which led to the best outcome.

Conclusion

According to the histologic behavior of the neoplasm, no standardized surgical approach is documented in the literature which has led to the controversy regarding surgical management. Hence this paper emphasizes the need for correlating surgical modalities with the histologic behavior of the neoplasm through a case series of patients.

Cirroid Aneurysm of Occipital Artery Rare of the Rarest

Dr. Tanvi Eknath Malankar

Dr. D.Y. Patil Dental College and Hospital Pimpri, Pune

Abstract

A case of 33-year-old man diagnosed with a rare case of cirroid aneurysm of occipital artery. It is a type of AV Malformation associated with the scalp and has no communication with the intracranial cerebral vessels. He was treated under general anaesthesia for surgical excision. An interdisciplinary approach of Neurosurgery and Oral and Maxillofacial team was made. Here we have discussed the diagnosis, treatment plan, clinical steps performed in the surgical management of Cirroid aneurysm of occipital artery. In-toto excision and thorough follow up has uneventfully led to success in the outcome.

Gorlin–Goltz Syndrome: A Rare Genetic Disorder: Case Series

Dr. Ramesh Kumar Mamatha

Narayana Dental College and Hospital

Abstract

Gorlin–Goltz syndrome, also known as nevoid basal cell carcinoma syndrome (NBCCS), is a rare inherited autosomal dominant disorder. Incidence is estimated to be 1 in 57,000 to 1 in 164,000. However, in Indian scenario, NBCCS has been rarely reported. It is characterized by multiple keratocystic odontogenic tumors (KCOTs), multiple basal cell carcinomas (BCC), skeletal, ophthalmic, neurological abnormalities, and facial dysmorphism. In this poster reporting three cases with clinical and radiological features suggesting of gorlin goltz syndrome presented in the same family.

Gorlin-Goltz Syndrome: A Rare Case Series of Familial Inheritance

Dr. Preeti Sharma

Saraswati Dental College

Abstract

Gorlin-Goltz syndrome (GGS) is a rare, autosomal dominant syndrome caused by mutations of the patched gene (PTCH) on chromosome 9q (22.3-q31). It has a high level of penetrance and diverse expression, commonly associated with basal cell carcinomas, odontogenic keratocysts, palmar and/or plantar pits and falx cerebri calcifications. Two major findings or one major finding and two minor findings confirm the diagnosis. More than 100 minor criteria are mentioned in the literature for diagnosing GGS. Despite diverse manifestations this syndrome is under reported, three cases of familial inheritance are reported in India till date. Early diagnosis and genetic counselling are essential for managing the syndrome. A total of 65 variants of PTCH mutations have been documented in literature, thus it would be not unanticipated for affected patients and their family members to have a spectrum of different genetic and clinical anomalies. There are only 64 cases reported till date since 1977 from India out of which this is the fourth case report showing the hereditary

involvement. All the three previously reported cases had only two affected members but this is the first case series reporting three affected of GGS with familial inheritance (mother and both her children). Their diverse manifestation in each are reported here which alerts the clinician and gives an insight for prompt diagnosis and its early management.

Case Report on OKC in Gorlin-Goltz Syndrome

Dr. Nidhi Jenson Ukken

K.V.G. Dental College and Hospital

Abstract

Odontogenic keratocysts (OKCs) are developmental cysts that arise from remnants of dental lamina. Odontogenic keratocysts (OKCs) may occur in two different forms, either as solitary (nonsyndromic OKCs) or as multiple OKCs (syndromic OKCs). Multiple OKCs usually occur as one of the findings in Gorlin–Goltz syndrome with other features such as skin carcinomas and rib, eye, and neurologic abnormalities. We report a rare case of Gorlin–Goltz syndrome in a 32-year-old female patient who presented with swelling in lower right (2019) and left (2011) back tooth region. Apart from these, the patient presented with frontal bossing, nevoid basal cell carcinoma, mild mandibular prognathism. After thorough clinical and radiological evaluation treatment was planned. Patient was followed up regularly and there were no signs of recurrence noted. In this paper we have discussed patients with multiple OKCs should be thoroughly evaluated as they are the major component of Gorlin–Goltz syndrome and early findings of this syndrome. In this paper we have discussed how the patients should be followed for a long time with proper medical care and genetic counselling so as to prevent the development of other complications such as malignancies.

Revisiting Palatal Mucormycosis in Post Covid Rhino-Orbital-Cerebral Mucormycosis

Dr. Aiswarya V.

All India Institute of Medical Sciences, Patna

Abstract

Background and Objectives

Rhino-ocular-cerebral *Mucor mycosis* (ROCM) is a well-known complication post COVID-19 infection. The extension of the disease into the palate is a grey area with no proper protocol for the management of the same in the existing literature. The objective of this presentation is to develop a classification system for the management of ROC *Mucor mycosis* extending into the oral cavity and to determine a standard protocol for the management of the same.

Methodology

We conducted a retrospective study wherein we evaluated and treated 50 cases of palatal *Mucor mycosis* post COVID-19, over a period of 3 months from May 2021 to July 2021. Patients were treated with intravenous Amphotericin B and Posaconazole tablets along with surgical debridement of necrotic tissue. Based on this we were able to derive a classification which would help us in treating future cases of rhino-ocular-cerebral *Mucor mycosis* cases extending into the oral cavity.

Summary of the Results

Among the 50 patients that were treated for ROCM extending into the palate, in 10 patients we were able to achieve primary closure, in 37 patients there was oro-antral communication, and in 3 patients a secondary flap procedure was planned due to the extensive skin involvement.

Conclusion

Palatal *Mucor mycosis* is associated with a grave prognosis. The classification system derived from the surgical treatment of these patients will not only help in providing a standard protocol, but will also provide a greater clarity with respect to resection of the diseased tissues in such patients.

Various Presentations of Mucormycosis in Post Covid patients

Dr. Shahana Parveen

Subharti Dental College and Hospital

Abstract

Mucor mycosis is the third invasive mycosis in order of importance after candidiasis and aspergillosis and is caused by fungi of the class Zygomycetes. This variant has already become a cause for global concern. The most important species causing *Mucor mycosis* is *Rhizopus arrhizal* (oryzae). Informally known as ‘black fungus’, *Mucor mycosis* commonly causes necrosis in the head and neck region including the nose, paranasal sinuses, orbits, and facial bones, with possible intracranial spread. The disease causes high morbidity and mortality given that it progresses rapidly and diagnosis is often delayed. Identification of the agents responsible for *Mucor mycosis* is based on macroscopic and microscopic morphological criteria, carbohydrate assimilation and the maximum temperature compatible with its growth. Treatment of *Mucor mycosis* requires a rapid diagnosis, correction of predisposing factors, surgical resection or debridement as part of source control and appropriate anti-fungal therapy. This paper discusses a variety of presentations and treatment of *Mucor mycosis* patients that reported along with their post operative complications.

Post COVID Mucormycosis: Importance of Multidisciplinary Disciplinary Management

Dr. Gokavarapu Sandhya

Apollo Hospitals, Jubilee Hills, Hyderabad

Abstract

The coronavirus disease 2019 (COVID-19) outbreak has caused significant destruction claiming over five million lives worldwide and effecting more than 200 million people all over the world. Covid 19 Infection causes transient immuno-suppression with steroid induced hyperglycaemia, creating fertile land for opportunistic infection in past SARS COV-2 invasion phase. Commonly known as black fungus, the widest spread fungal opportunistic infection, Mucormycosis, Fungal osteomyelitis of skull bones due to thrombosis of nutrient vessels to bone was found as late presentation, most commonly involving maxilla and frontal.

Patients and Methods

Here we present series of 47 cases having maxillary osteomyelitis in post covid associated Mucormycosis patients. 30 had ipsilateral inferior maxillary involvement and rest had B/L involvement. Necrosis of zygoma was found in 18, All patients were managed with debridement of necrotic areas confirmed by radiology and medical management with Ampho-B and Oral Posaconazole.

Conclusion

Mucormycosis, although rare in occurrence, it is an aggressive and potentially fatal disease in immunosuppressed patients. Early diagnosis with biopsy and radiology, prompt medical management and radical debridement can decrease the morbidity in these patients. Treatment completion involves improving the rehabilitation measures aimed at normalizing the general condition of patient, sugar levels and reconstruction of defects.

5-Fluorouracil: Trend Setter in Management of OKC

Dr. Sarah Paul

Mar Baselios Dental College, Kothamangalam

Abstract**Background**

Odontogenic keratocyst (OKCs) are benign lesions occurring in the maxilla or mandible with potential for serious morbidity and known for their propensity to recur. The management goal is to develop a method that minimize morbidity, maintain vitality of surrounding structures and reduce possible chances of recurrence.

Aims and Objectives

Incidence of OKC recurrence and inferior alveolar nerve injury when treated with topical 5% 5-Fluorouracil (5-FU) compared with Modified Carnoy's solution is reviewed.

Methods

Literature review till date on comparison of 5-FU and Modified Carnoy's solution done.

Results

OKC would respond to 5-Fluorouracil treatment because of their similarities to Basal Cell Carcinomas in molecular etiopathogenesis. The neurosensory deficit compared to Modified Carnoy's is less.

Conclusion

5-FU could be more ideal than Modified Carnoy's because of its ready availability, technical ease, shorter operating time, similar efficacy, and decreased morbidity. Topical application of 5-FU, after enucleation and peripheral ostectomy, effectively treats OKCs, resulting in normal bony healing with no adverse local or systemic effects. However large clinical trials are required.

A Curious Case of Adenomatoid Odontogenic Tumour

Dr. Mathew Joseph Thuruthel

PMS College of Dental Science and Research, Trivandrum

Abstract**Introduction**

Adenomatoid odontogenic tumor (AOT) is a well-established benign epithelial lesion of odontogenic origin. It is a rare tumour may be

partly cystic, and in some cases the solid lesion may be present only as masses in the wall of a large cyst.

Case Report

A 14-year-old male referred from a private dental clinic reported to our department with complaint of missing teeth and swelling in left maxillary region for 4 months. Clinically, a large swelling of size 2 × 2.5 cm size was noted with no sinus or pus discharge. Radiographically a large unilocular mixed radiolucent–radiopaque lesion seen extending superiorly from medial wall of right maxillary sinus to anterior maxillary alveolar process. Since the lesion was confined and well defined, an excisional biopsy was done along with surgical removal of impacted lateral incisor and canine.

Discussion

AOT occurs mainly in the second decade of life, and is uncommon in patients older than 30 years of age. Females are more commonly affected than males with a ratio of 2:1. AOT is frequently associated with an impacted tooth, a canine in more than 60% of the cases.

Conclusion

Correlating the surgical, radiographic, and histologic findings is required to obtain a final diagnosis of the AOT. Surgical removal of the tooth and the enucleation of AOT has been considered the treatment of choice.

Reference

1. Rick GM. Adenomatoid odontogenic tumor. *Oral Maxillofac Surg Clin North Am.* 2004 Aug;16(3):333–54.

Case Series-Recurrence Ameloblastoma of Infratemporal and Temporal Region

Dr. Jaslin P. A.

Government Dental College Calicut

Abstract

Ameloblastoma is a unique, histologically benign locally aggressive odontogenic neoplasm of epithelial origin involving the jaws. It is known for its high recurrence rate. Because of this reason ameloblastoma demands a radical surgical approach rather than a conservative approach. Recurrences can occur at difficult sites such as temporal and infratemporal fossa, orbit, anterior cranial base, paranasal sinuses etc. It is unusual for odontogenic tumours such as ameloblastoma to occur in the infratemporal fossa. Here we are discussing a case series of 3 cases of recurrence ameloblastoma in temporal and infratemporal area.

Chronic Osteomyelitis of Posterior Maxilla: A Case Presentation

Dr. Priyanka Jagadish Umarani

Vokkaligara Sangha Dental College

Abstract**Objectives**

Osteomyelitis is an inflammatory process of bone and marrow contents. It is commonly related to an infectious origin caused mainly by pyogenic staphylococcus and occasionally, streptococci, pneumococci and enterobacteria. These changes in bone are primarily seen in soft tissue followed by calcified tissue. It is an opportunistic infection

due to the complication of some other conditions rendering the host susceptible to disease. Consequences of this infection range from draining tract to malignant transformation. The two predominant causes are odontogenic infections and sinusitis. Immunocompromised states such as diabetes, HIV and malnutrition increase the risk of osteomyelitis.

Method

A 54 year-old male presented to us with pain and oroantral communication from left maxilla following dental extraction with offensive odor. Examination revealed a necrotic maxilla on the left side with oroantral communication. A computed tomography (CT) scan was suggestive of osteomyelitis of left Maxilla. Patient underwent surgical excision of the lesion.

Result

Satisfactory results were obtained with appropriate antibiotics. Functional outcomes were satisfying and no recurrence of the tumour could be observed so far.

Conclusion

Chronic osteomyelitis is a complication of non-treated or inadequately treated acute osteomyelitis. It can also be caused by a low grade prolonged inflammatory reaction. The goal of treatment is to arrest its spread and repair the damage it has caused. Appropriate treatment includes culture-directed antibiotic therapy and operative debridement of all necrotic bone and soft tissue.

A Miraculous Outcome of the Conservative Treatment of Odontogenic Keratocyst: A Unique Case Report

Dr. Monica Roy Chandel

Vokkaligara Sangha Dental College and Hospital, Bengaluru

Abstract

Introduction

The odontogenic keratocyst (OKC), earlier referred as the keratocystic odontogenic tumor, is a distinctive form of the developmental odontogenic cyst. OKC is unique because of its distinguishing clinical features, including potentially aggressive behavior, high recurrence rate, tendency to multiply and an association with the nevoid basal cell carcinoma syndrome (NBCCS). Treatment options includes a conservative approach or extensive surgeries and include marsupialization, enucleation, en bloc, and segmental resection.

Methodology

The patient was managed with enucleation under local anaesthesia followed by iodoform dressing every week and Carnoy's solution application every alternate week.

Results

The patient was followed up for 8 months. There was signification formation of healthy bone with respect to the cortical plates and floor of the defect.

Discussion

We hereby report a case of odontogenic keratocyst of mandible extending from one angle to the other, in a 27-year-old systemically healthy male patient with the complaint of swelling of the lower jaw for 1 year. His past history revealed trauma to the lower jaw due to self-fall 15 years ago. His medical history and personal history were nothing significant. Examination revealed a single, well-defined, irregular swelling seen on the lower jaw extending from one angle to the other with both buccal and lingual cortical plate expansion along with egg shell crackling. Radiographical examination revealed unilocular radiolucency extending from one angle to the other with a paper-thin lower border and was provisionally diagnosed as

ameloblastoma. However on histopathological examination it was found to be an odontogenic keratocyst. The patient was managed with enucleation under local anaesthesia followed up by iodoform dressing every week and Carnoy's solution application every alternate week. The patient was followed up for 8 months with overwhelming results.

Bilateral Odontogenic Keratocyst of Mandible: A Case Report

Dr. Sarbas V.

Govt Dental College Kottayam

Abstract

Introduction

Odontogenic keratocyst is a "benign uni or multicystic, intraosseous tumor of odontogenic origin, with a characteristic lining of parakeratinized stratified squamous epithelium and potential for aggressive, infiltrative behavior. OKC was first described in 1876. It was named by Phillipson in 1956. Highest incidence occur at 3rd decade of life. They are most common in mandibular molar region. It has been found arise from dental lamina. Histopathological examination is the gold standard for the diagnosis. Immunohistochemistry shows high proliferative index. Bilateral OKC are generally associated with syndromes like Gorlin-Goltz syndrome but exclusive variants are rare. We present a case report of a female patient aged 26 with a rare presentation of exclusive bilateral OKC.

Diagnostic Assessment

Patient reported to Department of Oral and Maxillofacial surgery, GDC kottayam for disimpaction of 38 and 48. Patient didn't have any extraoral and intraoral swelling. OPG was taken and radiolucent lesions were seen in the bilateral molar areas. I/B done and was reported as OKC. Gorlin-Goltz syndrome was ruled out by taking chest x-ray.

Treatment

Bilateral OKC was treated by enucleation, peripheral ostectomy chemical cauterization with carnoys solution with extraction of associated teeth under GA. Biopsy report came as OKC. The patient did not have any recurrence over a follow up period of 1 year. No complications were encountered.

Conclusion

Bilateral OKCs are rare entities and it is important to rule out syndromes like Gorlin-Goltz syndrome before treatment planning.

Inverted Ductal Papilloma: A Case Report with Brief Note on Literature

Dr. Meeran Sharif A.

Tagore Dental College and Hospital

Abstract

Inverted Papilloma's are a type of Schneiderian papilloma, representing an uncommon non-cancerous Sino nasal tumour that mostly affects middle-aged men. They occasionally undergo malignant transformation. On imaging, they classically demonstrate a convoluted cerebriform pattern seen on both T2 and contrast-enhanced T1 weighted MRI images. Inverted papilloma's account for approximately 0.5–4.0% of all nasal tumours and are most frequently seen in patients 40–60 years of age. The presentation can be similar to other

Sino nasal masses, with nasal obstruction, sinus pain, and epistaxis. There is a significant predilection for males (M:F ratio of ~ 3–5:1). Inverted papilloma's most commonly occur on the lateral wall of the nasal cavity, most frequently related to the middle turbinate/middle meatus and maxillary ostium, although they are seen elsewhere in the nasal passage. As the mass enlarges it results in bony remodelling and resorption and often extends into the maxillary antrum. We hereby report a case of Sino nasal ductal papilloma reported to our department sharing our experience.

Post Covid Jaw Osteomyelitis: Case Series

Dr. Pavithra K.

Rajah Muthiah Dental College

Abstract

The corona virus has challenged health professions and has evoked different range of reactions and types of responses around the world. A complex interplay of corona virus infection, immunosuppressive treatment and uncontrolled blood sugar levels have evolved. The occurrence of complications is increasing as the incidence of infection increases. An invasive lesion can lead to devastating effect in the patients. It is believed that timely identification and management of such necrotic lesions would significantly reduce morbidity and mortality. This case series aims to show progression of osteomyelitic changes in the maxillofacial region in COVID-19 recovered patients along with radiographic findings. This case series included 5 patients (3 male and 2 female) came to Dept of Oral and Maxillofacial Surgery, Cuddalore Government Dental College and Hospital, who had history of covid infection along with other co-morbidities like uncontrolled Diabetes mellitus and attempted extractions for mobile teeth. Surgical debridement or aggressive surgical resection was done for all patients regarding the necrosed site. Nasal antrotomy was performed for patients whose maxillary sinus involvement is evident. With the rise in COVID-19 cases, there has been an increase in fungal osteomyelitis cases. When compared to the mandible, maxillary osteomyelitis is rarely occurred due to cancellous bone and increased vascularity. As maxillary osteomyelitis is rare, fungal infection of maxillary sinuses was also considered rare, seen mainly in immune-compromised patients. This case series describes the relativity between diabetes mellitus, covid-19 and pharmacotherapy that have increased risk of osteomyelitis which manifested jaw necrosis.

Management of Arteriovenous Malformations Utilising Sclerosing Agent: Sodium Tetracyclate Sulphate

Dr. Ashwini Paturkar, Dr. Priya Raju Bhujje

Goa Dental College and Hospital, Aurangabad

Abstract

Background

Management of arteriovenous (AVM) malformations of the jaws is complex, extremely challenging and varies according to the nature of the lesion. Traditionally, embolization with the resection of the lesion has been used for management of AVM. Surgical treatment of arteriovenous malformations has been usually associated with significant morbidity and mortality due to potential risk for massive blood loss as

well as extensive resection of the craniofacial skeleton may be associated with growth disturbance, functional compromise, and cosmetic deformity. We describe our experience of using sodium tetracyclate sulphate injection sclerotherapy to treat a case presenting with arteriovenous malformations of the mandible.

Methods

This paper describes the management of a case of the mandibular arteriovenous malformations using transosseous injection of the sodium tetracyclate sulfate to the periphery of the lesion. The procedure was performed four or five times at 2 weeks intervals respectively. Imaging was performed using cone beam computed tomography.

Results

Clinical and radiological evaluation of the case showed reduction in the size of the lesions following sclerotherapy alone.

Conclusion

Conservative interventional management using trans-osseous injection of sclerosing solution sodium tetracyclate sulphate was successful in managing mandibular arteriovenous malformation which obviated the need for extensive surgical resection.

From Interdependence to Independence: A Saga of Managing Mucormycosis with Palatal Mucosa

Dr. Abitha V.

Sri Ramachandra Institute of Higher Education and Research Institute

Abstract

Together with the ongoing serious COVID-19s wave in India, a serious fungal infection, *Mucor mycosis* has been increasingly found in COVID-19-recovered patients. *Mucor mycosis* is an invasive disease associated with high mortality ranging from 25 to 62%. Once the maxilla is involved, surgical resection and debridement of the necrosed areas can result in extensive maxillary defects. We have come across 15 such patients with *Mucor mycosis*. All this 15-patient required either partial or complete maxillectomy. The clinician is to face many a challenge in order to replace not only the missing teeth, but also the lost soft tissues and bone. The prosthesis (Obturator) lacks a bony base and the lost structures of the posterior palatal seal area compromise retention of the prosthesis. Complete removal of the hard palate may result in hypernasal/unintelligible speech in addition to masticatory difficulties, as the tongue is unable to make contact with a solid surface during these functions. Furthermore, the surgical removal of maxilla along with the soft tissue will cause oronasal/oroantral communications. To avoid above mentioned complications, we preserved palatal mucosa for a few of our *Mucor mycosis* case. The present paper will describe the advantages of preserving the palatal mucosa.

A Retrospective Study for Epidemiological Distribution of Odontogenic Tumors: An Institutional Study

Dr. Pragma

Nair Hospital Dental College

Abstract**Introduction**

Odontogenic tumors are a group of heterogeneous lesions having inductive interactions that is usually seen among the embryonic component of tooth germ. The geographical distribution and characteristics of these lesions vary widely. Many retrospective studies have been conducted in different subcontinents but the questions related to relative frequency and incidence of certain odontogenic tumors remains unanswered.

Aim and Objective

This study was conducted with aim to determine the age, and predilection, site of distribution, association between site and distribution of odontogenic tumours and to compare occurrence and frequency between age and gender.

Material and Method

The records of patient presented with odontogenic tumors seen at Department of Oral and Maxillofacial Surgery, Nair Hospital Dental College, Mumbai from 2008 to 2018 were reviewed and reclassified based on WHO classification 1992 and 2017. The mandible and maxilla were divided into 7 anatomic regions and the distribution of odontogenic tumors among these regions were retrieved, recorded and analysed.

Results

Out of a total of 121 cases of odontogenic tumors, 120 were benign and 1 was malignant tumor, with predilection for mandible. Male predilection with overall ratio of M:F 1.4:1 was observed.

Conclusion

Within the limitations of the present study, Ameloblastoma (61.4%) remains the most frequent tumor with predilection for mandible and odontoma was second most common tumor. Further it was observed that they occur mostly in mandible in 2nd–3rd decade of life with male predilection.

Rhino-Orbital Mucormycosis-It's Sudden Rise Post Covid: The Beginning of the End?

Dr. Divya Parimi

College of Dental Sciences

Abstract

Mucor mycosis is a debilitating disease, notorious for its aggressive spread and predilection toward immunocompromised and diabetic individuals. Although relatively uncommon, this dangerous disease has now crept up the ladder on account of the COVID-19 pandemic, thereby making its thorough knowledge an indispensable necessity for the present-day maxillofacial surgeon. There are various forms of *Mucor mycosis*, among which the rhino-orbital variant is the most common one (67.7%), having a mortality rate of 44% in diabetics. At College of Dental Sciences, Davangere, we have seen up-to 50 cases, among which all patients were known diabetics with baseline sugar levels of up-to 500 mg/dl. 4 patients were previously COVID-19 infected.

- Operated-9.
- MALES > FEMALES.
- 40–50 years.

Aim

The aim of this article is to present 3 such cases, and the various diagnostic challenges and therapeutic dilemmas we faced. Upon presentation, the first step was fungal screening, followed by CECT. The treatment given was aggressive surgical debridement by

total/subtotal maxillectomy, with removal of zygoma, and orbital floor if indicated, along with antibiotic and antifungal administration. Proper post-operative care was given, followed by prosthetic rehabilitation after 1 month. Regular follow-up is being done, and recovery has been successful.

References

1. Spellberg, B., Edwards, J. and Ibrahim, A., 2005. Novel Perspectives on Mucormycosis: Pathophysiology, Presentation, and Management. *Clinical Microbiology Reviews*, 18(3), pp. 556–569.
2. Shinde, R., 2013. Rhino-Orbital Mucormycosis in Diabetes Mellitus. *Journal of clinical and diagnostic research*.

A Case Series of Mucormycosis

Dr. Sakshi Pandey

Rama Dental College Hospital and Research Center

Abstract**Introduction**

Mucor mycosis is a rare opportunistic infection caused by a group of saprophytic fungi, belonging to the order—Mucorales and class—Zygomycetes. The organisms have a tendency for vascular invasion, forming thrombi within the blood vessels, leading to diminished blood supply and tissue necrosis.

Case Report

This case report of 5 cases treated in our department with in year 2021. Describes a case of *Mucor mycosis* affecting maxilla with good prognosis and satisfactory healing. Our objective in presenting this particular case is to emphasize that early diagnosis and proper management leads to good prognosis and high survivability.

Discussion

Imaging techniques are not usually diagnostic and cultures are not totally reliable. Definitive diagnosis is exclusively obtained by means of histological examination. Even with a prompt diagnosis, treating underlying diseases and aggressive medical and surgical management, management is often not effective, leading to an extension of the infection and death. Prompt diagnosis is very important, allowing earlier control of the infection and improving patient survival (Spellberg et al., 2009). Currently, novel regimens for the treatment of *Mucor mycosis* include combination lipid-based amphotericin plus either an echinocandin or itraconazole or both. As well, compassionate-use Posaconazole is currently available, and its potential for combination therapy.

Conclusion

Finally, prompt diagnosis, reversal of predisposing conditions, and aggressive surgical debridement remain cornerstones of therapy for this deadly disease.

Extensive Ameloblastoma of Mandible: Surgical Management and Immediate Reconstruction: A Case Series

Dr. Thiyam Sophia Devi

VS Dental College and Hospital

Abstract**Objective**

Ameloblastoma is a rare histological benign but locally aggressive tumor with a marked tendency for recurrence. It represents approximately 1% of oral tumors. About 80% of ameloblastomas occur in the mandible and the remaining in the upper jaw and clinically appears as an aggressive odontogenic tumor, often asymptomatic and slow-growing, with no evidence of swelling. Among the 6 histopathological subtypes, the follicular pattern type has the highest recurrence rate of 29.5% and acanthomatous type having the least recurrence rate of 4.5%. The treatment of this pathology ranges from simple enucleation to resection of large sections of the affected bone. Taylor in 1975, first described vascularised fibula graft for composite reconstruction of the bone and soft tissue defect. After demonstrating that osteotomies can be performed in vascularised fibula grafts without compromising the viability of the bone segment, these grafts became the state of art reconstruction method after mandible ablation.

Method

This is a case report of two patients with follicular ameloblastoma of the mandible and segmental mandibulectomy was done. Fibula was osteotomised and reconstructed to resemble mandible shape and fixed to reconstruction plate with intact pedicle in case 1 and only with reconstruction plate in case 2.

Result

Esthetic and functional outcomes were satisfying and no recurrence of the tumor could be observed so far.

Conclusion

In our opinion, radical surgical resection of ameloblastoma is the treatment of choice. Especially in cases of large, expansive tumours a radical surgical protocol is a very good option to prevent relapse of the tumor on a long-term basis. Immediate reconstruction of the defects allows good functional and aesthetic outcome and decreases the number of surgeries.

Conservative Management of Odontogenic Keratocyst

Dr. Kiran Kumar

Al Ameen Dental College and Hospital, Bijapur

Abstract**Introduction**

Odontogenic keratocyst (OKC) is a benign lesion recently reclassified as an odontogenic cyst in the present WHO classification of Head and Neck tumors (2017) mainly based on its clinical and histopathological features. It is the cyst arising from the cell rests of dental lamina. It can occur anywhere in the jaw, but commonly seen in the posterior part of the mandible. It occurs in any age group, but most commonly seen in the second and third decades of life with male predilection. It has very aggressive nature and high recurrence rate. OKC tends to grow in an anteroposterior direction within the medullary cavity of the bone without causing obvious bone expansion. It can be unilocular and multilocular. The treatment modalities include decompression marsupialisation, enucleation and resection.

Aim and Objective

The purpose of this paper is to evaluate the clinical outcome after conservative management of OKC.

Materials and Method

An intraoral approach was performed under general anaesthesia. Extensive enucleation of the cyst was done followed by peripheral osteotomy and chemical cauterisation of the cystic cavity with

Carnoy's solution. Primary closure was done and the patient was followed up regularly.

Conclusion

Conservative management of OKC yielded considerably good results with adequate bone formation postoperatively. The functional ability of the mandible was maintained. The patient did not experience any considerable nerve deficit after the procedure.

Rare Paediatric Benign Non odontogenic Tumours: 5 Cases Reports

Dr. Supraja R., Dr. Arun Kumar K.

Tamilnadu Government Dental College and Hospital

Abstract**Introduction**

Paediatric tumours arising in the facial bones comprise benign and malignant lesions of osteogenic, fibro genic, hematopoietic, neurogenic, or epithelial origin. In this paper, we report 5 rare cases of non-odontogenic tumor of various origin, all having incidence of less than 10%.

Case Reports

Five cases discussed here each belonging to different origin of tissues are discussed.

CASE 1—13-year-old with Central giant cell granuloma Right angle of mandible region.

CASE 2—A 5-year-old with intraosseous Neurofibroma of Right angle of mandible region extending to ramus.

CASE 3—A 11-year-old male child with Squamous papilloma of hard palate.

CASE 4—A 5-year-old male child with non-ossifying fibroma of right zygoma region.

CASE 5—12-year-old male child with Langerhans cell Histiocytosis right body of mandible.

Discussion

Mesenchymal origin—central giant cell granuloma—incidence 7% of benign tumours ossifying fibroma—in zygoma region less than 2 cases have been reported so far epithelial origin—squamous papilloma—8% of all oral tumours in children. Neurogenic origin—intraosseous Neurofibroma in paediatric age 10 cases in literature. Haematopoietic origin—Langerhans cell histiocytosis 4–9 cases per million Neurofibroma alone was managed by segmental resection of the mandible whereas all the other lesions were managed by excision with no recurrence.

Conclusion

This paper reveals the various rare differential diagnoses to be considered when non odontogenic lesions are suspected and their treatment modalities.

Paediatric Maxillofacial Tumors: Our Experience

Dr. Smitha Bhat

SDM College of Dental Sciences and Hospital

Abstract**Introduction**

Pathologies in the oral and maxillofacial region may present either as a primary lesion or as a manifestation of systemic disorders. Fortunately, most of the pathologies in the paediatric population are benign. Hence, may warrant less invasive surgery. The malignant tumours may be rare but can have significant long lasting effects on the patients due to high morbidity and mortality rates. Based on the tissue of origin, these tumours may be classified as odontogenic and nonodontogenic. Irrespective of the tissue of origin, prompt diagnosis and effective treatment is required to prevent severe local destruction and spread.

Aims and Objectives

This study was aimed at analysing the incidence and distribution of various paediatric maxillofacial tumours at SDM Craniofacial Surgery and Research Centre, Dharwad over a period of 20 years.

Methodology

This retrospective study analysed case records of patients visiting craniofacial surgery and Research centre from January 2000 to March 2021. Patients below the age of 14 were included in the study. Patients were assessed based on their age; diagnostic features and treatment algorithms. Patients were divided based on the final histopathology interpretation as odontogenic/non odontogenic and benign/malignant.

Results

A total of 77 patients were included after analysing the case records of all patients from year 2000 to 2021, of these 22% were odontogenic tumours and 78% contributed to non odontogenic tumors. In the nonodontogenic group, 10% of cases were malignant.

Conclusion

Lesions occurring in the jaws are often difficult to distinguish from one another by clinical examination or radiological examination alone. A thorough knowledge of the nature of disease helps to narrow down the differential diagnosis. Malignancies of the jaw bones in this age group, albeit rare can cause severe local destruction. Early diagnosis and prompt intervention goes a long way in preventing severe morbidity and mortality.

Single Modality Surgical Treatment of Head and Neck Arteriovenous Malformations

Dr. Abhishek Roy, Dr. Mukherji Srijan

Pacific Dental College and Hospital

Abstract**Background**

Arteriovenous malformations (AVM) of the head and neck region are benign congenital lesions, which are persistent and progressive in nature. Mostly surgery is avoided not only by the patient, for the fear of undergoing one, but also by the concerned surgeon for the risk of losing the patient on the table due to failure in achieving haemostasis. The non-invasive techniques include sclerotherapy, radiotherapy, interferon treatments that deliver a temporary result and above all, in high flow and predominantly venous lesions, they would seldom succeed. AVM may be managed by embolization—the invasive technique apart from surgery. None of the above modalities, invasive or non-invasive guarantee a cent percent one stage dependably long term solution. Surgery still remains to be a single modality invasive procedure that is undoubtedly challenging for any maxillofacial surgeon [1, 2].

Objective

We present five different cases of varied presentations of AVMs managed by single modality surgery at our unit and evaluate the outcome in the peri-operative stage and in the long term.

Results

Consistent review and follow-up of all patients have shown that the surgical one stage mode of management of AVMs is a successful treatment modality.

Conclusion

The surgical management of AVMs is a technically difficult undertaking. However, the results indicate a definitive need for developing the skill and expertise to tackle this often scary pathology head on with the Bard Parker, for a straightforward, low tech, non-cumbersome, economical and predictable cure.

References

1. Lee et al., “Management of arteriovenous malformations: a multidisciplinary approach,” *Journal of Vascular Surgery*, vol. 39, no. 3, pp. 590–600, 2004.
2. Dieng et al., *Giant Arteriovenous Malformation of the Neck, Case Reports in Vascular Medicine*, vol. 2015, Article ID 124,010, 3 pages, 2015.

Clinical Diagnostic Dilemmas and Role of Histopathology in Planning Treatment

Dr. Arvind Karikal

ABSMIDS**Abstract**

Doctors and surgeons are trained to assess the patient’s disease or problem by eliciting a brief history, noting down keen observations of the signs and symptoms, and conducting a thorough physical examination. To aid in the doctor’s diagnosis of the presented problem, they have additional tools such as radiographs and scans. Yet, at times with all the above information, the diagnosis can be pretty intriguing and misleading. This paper would like to highlight four such cases where the clinical signs and symptoms are very similar to the more common pathologies/mimicked tumours. But on deeper analysis with histopathology and immunohistochemistry showed a completely different entity. Therefore highlighting the role of histopathology in coming to a final diagnosis before the treatment is finalized.

Decompression as a Lone Modality for Treatment of Large Cysts of Jaws

Dr. Sachin Kumar

School of Dental Sciences, Greater Noida

Abstract**Introduction**

Surgical removal of large cysts is associated with risks and complications such as pathologic fracture of the mandible, damage to vital structures, infection, loss of teeth associated with the cyst, facial deformity, loss of mandibular continuity, loss of masticatory efficiency, increased cost of reconstruction of lost bone and most of all a high rate of recurrence of the cysts. Decompression has been

suggested as a conservative method of treatment of such large cysts with inherent advantages of preserving all vital structures, the whole bone stock, facial contour, masticatory efficiency and most importantly a recurrence rate which is worst as much as that reported with surgical removal.

Method

Treatment of large cysts done by decompression technique alone followed by irrigation with 0.12% chlorhexidine and study parameters related to the treatment and its outcome. Total 13 cysts were included in this study of which 9 cysts were present in mandible, whereas 4 cysts were present in maxilla. Patients were reviewed with panoramic films before and after decompression.

Result

Bone regeneration is evident and can be noticed in patients' pre-op and post-up radiological study. Complete resolution was noticed in 11 cysts after decompression. 2 cysts show incomplete resolution.

Discussion

In this study, the average decompression period was 8.1 months, and the lesions showed an average reduction of > 80%. In most of the patients, lesions completely disappeared after only decompression.

A Surgeon's Dilemma in Diagnosing and Treating Vascular Anomalies of the Maxillofacial Region

Dr. Amrutha Varshini K.

SDM College Of Dental Sciences and Hospital, Dharwad

Abstract

Congenital vascular anomalies are poorly understood since the time of their discovery and have been recognized as distinct entities with unique characteristics which pose a challenge to the surgeon; from determining to planning the management of the lesion. In consideration with the psychological trauma of a visible lesion in a growing child and the sequelae of the lesion progressing to enormous size, it demands a tailored treatment plan to obtain the best possible results. The determinant characteristic features of the lesion which is identified clinically are additionally confirmed with the radiological investigations such as Doppler ultrasonography, contrast-enhanced computed tomography, CT angiography and MRI. Once diagnosed, there is an array of treatment modalities which has developed over the years but choosing the most appropriate modality is a task. The management of vascular anomalies i.e., the hemangiomas and vascular malformations varies based on the stage, extent and type of the lesion and addressing any residual deformity. Depending on the type of the lesion the treatment options can vary from benign neglect, use of steroids, laser therapy, sclerotherapy, embolization and surgical resection. The outcome is however unpredictable due to poor evidence when deciding on a particular treatment. This paper presents our experience of managing vascular anomalies through a series of cases after thorough study of the lesions preoperatively with the aid of radiological investigations and adequate treatment planning to minimize complications and obtain satisfactory results.

Pitfalls and Remedies in Jaw Cyst Decompression

Dr. Ravi Veeraraghavan

Amrita School of Dentistry, Kerala

Abstract

Introduction

Decompression or marsupialization is a universally accepted treatment modality to manage jaw cyst, either as an independent method, or as a precursor to an eventual enucleation. Advantages to using marsupialization prior to enucleation in large cysts include prevention of morbidities such as pathologic fractures, OAF, soft tissue tumour involvement, nerve injuries and loss of tooth vitality.

Aims and Objectives

To determine the difficulties and hindrances faced during the management of jaw cyst by marsupialization procedure; and to suggest preventive measures.

Materials and Methods

The hospital records of cyst decompression cases in the last 4 years were revisited and analysed for perceived difficulties and unexpected downsides and complications.

Results

The practical difficulties, planning hiccups and unexpected events were recorded. They included planning of sequence, designing of the plug, unexpected sequelae and complete or partial failures.

Discussion

Marsupialisation is an effective technique to manage large jaw cysts. Even in aggressive lesions, it results in bone formation and some shrinkage. The problems related to the technique are multifarious. Planning the marsupialization plug on the alveolar ridge is ideal, but in specific cases, it may have to be placed on other sites. Plugs pre-fabricated on study models may not always be accurate, and may need to be restructured. The lesion may heal under the plug, thus losing the ability to decompress. The cyst may shrink only in some aspects and may continue to grow on other sides, resulting in a more traumatic/radical enucleation than initially planned.

Case Report of Giant Sialolith in the Left Submandibular Salivary Gland

Dr. Anish Nelson

AJ Institute of Dental Sciences Mangalore

Abstract

Salivary gland sialoliths are caused by formation of calculi in the gland ducts leading to pain, swelling and salivary flow obstruction. A male patient, 60 yrs old reported to Maxillofacial surgery OPD with pain, swelling with respect to left submandibular salivary gland region since 7 days. Intraoral examination revealed a solid mass in the left side of floor of mouth, not adherent to any structures. CT scans done revealed a radio-opaque structure approximately of 4 * 3 cm in the left side Wharton's duct. Under general anaesthesia incision was given on the swollen floor of the mouth thereby opening the duct and exposing the calculi; which was removed by application of light pressure. Everted suturing was done for prevention of fistula formation. patient was kept on analgesics and antibiotics. Edema and pain reduced eventually and patient was discharged from hospital uneventfully on post-operative day five.

Case Report: Local Recurrence of Conventional Ameloblastoma of the Mandible With Temporal Extention

Dr. Sohin Amit Chaudhari

Kokilaben Dhirubhai Ambani Hospital And Medical Research Centre

Abstract

Introduction

Ameloblastoma is a true neoplasm of odontogenic epithelial origin. It is the second most common odontogenic neoplasm. Its incidence, combined with its clinical behaviour, makes ameloblastoma the most significant odontogenic neoplasm. According to the World Health Organization, Ameloblastomas are classified into the following types: conventional, unicystic, and peripheral. We would like to present a case report of a local recurrence of conventional ameloblastoma operated elsewhere in 2007.

Content

The patient complained of swelling on the right side of the face which was growing gradually and caused significant amount of facial asymmetry. The patient had biopsy done elsewhere in 2020 which was confirmatory of Ameloblastoma. A CT scan was done to rule out the extent of the lesion. Surgical resection followed by reconstruction was performed. Final HPR was also confirmatory of an ameloblastoma.

Conclusion

Ameloblastoma is an odontogenic tumour of the epithelium which is known to be locally aggressive. A close follow up is needed. Surgical treatment of the lesion and appropriate reconstruction should be performed.

Mucor: An Unexpected Black Out

Dr. Swathi Iyengar Singh, Dr. Manish Kumar Singh

Manaswa Oral and Facial Aesthetic Centre

Abstract

Introduction

India witnessed the looming threat of an endemic in the pandemic that affected only a particular class of population-mucormycosis. A fungal disease which well existed before, had a new presentation. Rhinocerebral variant of mucormycosis had the highest presentation in this covid era and more so in the Indian subcontinent. We present to you our case series of 25 cases, our treatment protocols, the rehabilitation and the possible explanation to many unanswered questions that this fungal disease has raised.

Patients Demographics

A total no of 25 patients within the age range of 35–70 years presented with different symptoms like tooth loosening, swollen gums, headache, blurring of vision etc. with previous history of recent covid-19 infection. Based on the concoction of symptoms displayed by patients it was finally diagnosed as Mucormycosis.

Management

All patients were treated with aggressive debridement of the diseased structures followed by medical management with antifungal agents and brew of other medicinal supplements. Upon complete remission of the disease, facial reconstruction was planned, many of which were multi-staged process to finally bring out the acceptable aesthetics.

Conclusion

Mucormycosis is a very aggressive and devastating disease; both for the patient as well as the patients family. A vigilant examination and bellicose approach with adequate antifungal support is key to the survival of these patients.

Efficacy of Gas Combination Cryotherapy in the management of Odontogenic Keratocyst of Maxilla and Mandible

Dr. Giri Sankar M.

Amrita School of Dentistry, Aims Campus, Kochi

Abstract

Background

Odontogenic keratocyst is a benign yet aggressive and locally recurrent lesion that affects the maxillofacial region. Management of this lesion is very controversial, and the currently accepted treatment modalities include complete enucleation coupled with adjuvant measures such as peripheral ostectomy and chemical cauterization. We used a gas combination cryotherapy as an adjuvant, where there is a fall of temperature to as low as -500°C , as a better alternative, offering low recurrence rate and minimal morbidity.

Objective

To evaluate the outcome in the management of odontogenic keratocyst following cryosurgery using a combination of propane, butane and isobutane gases.

Methods

Patients with radiographic and histopathologic evidence of Odontogenic keratocyst were selected in the period of December 2017–January 2020. After enucleating the cyst, cavity was sprayed with a combination of propane, butane and isobutane gas, commercially available as “ENDOFROST TM”. Periodic postoperative follow up was done upto 15 months. After 15 months a review CBCT was taken to assess the amount of bone formation, the presence of any pathologic fracture or recurrence.

Result

10 patients were included in the study. Only 2 out of 10 patients developed neurosensory deficit in the immediate post-op period. Of these two patients, one patient recovered completely within 12 months and the other recovered within 15 months. None of them developed any recurrence or pathologic fracture at the end of 15 months.

Conclusion

The results of our study shows that enucleation followed by cryosurgery is an effective therapy for managing OKC. It is a safe, and low-cost therapy with minimal complication.

Wait and Watch Strategy after Marsupialization for Odontogenic Keratocysts: Our Experience

Prof. Dr. Sajesh S.

Sree Mookambika Institute of Dental Sciences, Kulasekharam

Abstract

Introduction

The odontogenic keratocyst is a cystic lesion of odontogenic origin with high recurrence rate. Decompression or marsupialization seem to

be more conservative option in the treatment OKC. Pogrel and Jordan reported the use of marsupialization as a definitive treatment of Odontogenic Keratocyst.

Aims and Objective

The objective of this study was to report our experience with the treatment of 3 odontogenic keratocyst patients with a conservative treatment protocol based on marsupialization.

Materials and Methods

Three patients in the age range of 20–30 years who came to our department of oral and maxillofacial surgery of sree mookambika Institute of Dental Sciences; were diagnosed with odontogenic keratocyst underwent marsupialization with a long term follow up of more than 3 years.

Results

All the three cases were treated with marsupialization alone. All patients are under follow-up with continuous evaluation clinically and with panoramic radiographs. No recurrence in all three cases.

Summary and Conclusion

Marsupialization is an ideal alternative procedure for the treatment of odontogenic keratocyst, that in addition to being conservative, is also cost effective. A systematic and long term follow up is considered to be a key element for successful results.

An Inscrutable Journey of Surgical Ciliated Cyst of Maxillary Antrum Mimicking Radicular Cyst

Dr. Arsalan Ansari

Terna Dental College, Nerul, Navi Mumbai

Abstract

Introduction

Surgical ciliated cysts, or postoperative maxillary cysts, are benign cystic lesions induced after a surgical procedure in the maxillofacial area. It is a cystic lesion in the maxillary region that develops after radical sinus surgery to treat maxillary sinusitis.¹ The aetiology is believed to be trauma or surgery in the region of maxillary antrum.² The rationale behind this report is to emphasize that even a traumatic extraction of tooth, Sinus floor augmentation, periapical curettage after removal of tooth can damage the floor of the sinus and lead to the cyst formation.³ Reporting 2 cases where, I performed enucleation of the cyst with the patient under general anaesthesia. Histological examination of the specimen showed a surgical ciliated cyst. In conclusion, surgical ciliated cysts could occur after maxillary sinus surgery and the presentation of the cysts can mimic inflammatory cysts of dental origin. A history of maxillary sinus surgery and the histopathology of respiratory epithelium of the cyst lining are the keys to diagnosis of a surgical ciliated cyst.

References

1. Yiu Yan Leung et al. Surgical Ciliated Cysts May Mimic Radicular Cysts or Residual Cysts of Maxilla. *J Oral Maxillofac Surg.* 2012;70:264–269.
2. Ramakrishnan DS et al. Surgical ciliated cyst of the left maxilla—A case report of unusual pathogenesis. *Ann Maxillofac Surg* 2020;10:479–83.
3. Shinsuke Yamamoto et al. Surgical Ciliated Cyst Following Maxillary Sinus Floor Augmentation: A Case Report. *Journal of Oral Implantology* 2017;43(5)360–364.

Reconstruction of the Palatal Defect of Adenomatoid Hyperplasia of Minor Salivary Glands Using Inverted Fan Shaped Temporalis Flap: A Case Report

Dr. Lida Mary John George

AJIDS

Abstract

Introduction

Adenomatoid hyperplasia is a rare cause of swelling of the oral minor salivary glands. However, it is significant due to its clinical resemblance to salivary gland tumors.

Case Report

This case report illustrates a case of adenomatoid hyperplasia of salivary glands on the palate of a 44-year-old man. Reconstruction of the moderate sized defect of the palate was done using the inverted fan shaped temporalis flap.

Discussion

Temporalis flap is known for its robust blood supply, flap consistency and close proximity to the defect and has limited rate of complications which makes the temporalis flap a safe and reliable option among all other regional flaps. This is a documented rare occurrence of a benign lesion in the palate and attempts to provide a brief overview of diagnosis and management.

A Rare Case of Melioidosis of the Scalp Presenting as Necrotising Fasciitis

Dr. Jefferson Prince, Prof. Dr. Baliga mohan

Abstract

Melioidosis is a disease caused by *Burkholderia pseudomallei*, a gram-negative environmental bacteria endemic in south-east Asia and Northern Australia, but only sporadically reported in India. The disease is usually considered severe and many a times fatal due to melioidosis septic shock. Complicating the treatment is the difficulty in eradication of the organism, and a high rate of relapse. Appropriate and prolonged use of antibiotics is also required, along with patient compliance and understanding of the nature of the disease. We present a case of Melioidosis which presented as necrotizing fasciitis, which required both surgical management of the primary infection and specific medical management of the disease. As oral and maxillofacial surgeons we need to be aware of such diseases which even if sporadic might cause mortality of the patient if inadequately treated.

“Quiet But Not Quite”: A Rare Case Report

Dr. Soumi Samuel

Ab Shetty Memorial Institute of Dental Sciences

Abstract

Introduction

Adenomatoid odontogenic tumour (AOT) accounts for 1–9% of all odontogenic tumours. AOT is a tumour of odontogenic origin and is defined as A tumour of odontogenic epithelium with duct-like structures and with varying degrees of inductive change in the

connective tissue. The tumour may be partly cystic and, in some case, the solid lesion may be present only as masses in the wall of a large cyst. It is categorized as a tumour with occurrence of 1–10%. Dreibalt used the term “Pseudoameloameloblastinoma”. Philipsen and Birn in 1969 proposed the name “Adenomatoid Odontogenic Tumour which was adopted since then

Presentation

A 13-year-old girl presented with left anterior maxillary swelling of about 2 months duration. The radiographs showed a well-defined, unilocular radiolucency in maxilla with expansion and thinning of all its bony walls with the left upper canine tooth and without any evidence of calcifications. The enucleation of the cyst was done.

Discussion

It appears to be, mostly prevalent in young subject, mostly during the second decade of life. The maxillary region is most affected when compared to the mandible. Its presentation is a slow-growing, asymptomatic, quiet but not quite a lesion. Here we report a case of the adenomatoid odontogenic tumor (AOT).

Management of Paediatric Ameloblastoma

Dr. Ajay Desai

Army Dental Corps

Abstract

Introduction

Ameloblastoma is a benign odontogenic tumour of epithelial origin that is slowly growing, locally aggressive, has a high recurrence rate but is uncommon in children. It has a peak incidence in the third and fourth decades of life. Treatment of ameloblastoma in children is complicated by 3 factors: (1) physiologic factors such as the continued facial growth, different bone physiology and presence of unerupted teeth; (2) difficulty in initial diagnosis; and (3) predominance of the unicystic type of ameloblastoma.

Aim

To present the outcome and advantage of a conservative treatment approach in the management of Unicystic Ameloblastoma in a Paediatric patient.

Materials and Methods

A 11 year old individual reported with osteolytic lesion in relation to right ramus of the mandible involving the body with impacted teeth mimicking dentigerous cyst. Incisional Biopsy was suggestive of Ameloblastoma without any known subtype. Considering the age and the subsequent reconstruction options he was operated for peripheral osteotomy with chemical cauterization.

Results

Satisfactory postoperative outcome was achieved. The case was followed up for 2 years with no sign of recurrence.

Conclusion

Ameloblastomas in children differ from those in adults, with a higher percentage of unicystic tumours. Enucleation with Peripheral osteotomy seems a viable option in paediatric patients considering the amount of postop morbidity associated with aggressive management which can always be taken up at a later stage if warranted.

Keywords Paediatric, Unicystic, Ameloblastoma

Central Giant Cell Granuloma: A Case Report

Dr. Anita Mohanty

Kalinga Institute of Dental Sciences, Bhubaneswar

Abstract

Background

The central giant cell granuloma (CGCG) is an uncommon intraosseous lesion of jaws composed of cellular fibrous tissue with several foci of haemorrhage, multinucleated giant cell aggregations, and occasionally woven bone trabeculae. It was formerly described as giant cell reparative granuloma which is a non-neoplastic proliferative lesion of unknown aetiology, typically occurring in mandible. However, it can also affect the maxilla.

Presentation of Case

We are presenting a case of central giant cell granuloma of maxilla in a 34 years old male patient. Extra-oral examination revealed a diffuse swelling on the right side of face causing slight obliteration of nasolabial fold resulting in facial asymmetry. Intra-oral examination showed a purple expansile mass in the region of upper right premolar, molar region. Diagnosis was established on the basis of clinical examination, radiological interpretation and histopathologic investigations. This paper also describes management of the case with a brief review of literature of CGCG.

Discussion

CGCG is a rare bony lesion in the head and neck region. It is a non-odontogenic tumour that is not seen in any other skeletal bone. It can occur at any age but presents most frequently in the 2nd and 3rd decades and is twice as frequent in females. Although there are some non-surgical approaches for the lesion, usually surgical curettage for smaller lesions and en bloc resection for larger lesions are widely accepted.

Adenoid Cystic Carcinoma of the Right Maxillary Sinus

Dr. Nikhil Singh

Kalinga Institute of Dental Sciences

Abstract

Background

Intra-oral adenoid cystic carcinoma is an uncommon malignancy of the minor salivary glands. It has a variable clinical course, developing as a slow growing swelling with a tendency for wide local infiltration, perineural invasion, local recurrence, and distant metastasis. Intra-orally, the hard palate is the most common site involved.

Case Presentation

This paper reports a case of adenoid cystic carcinoma (ACC) of the posterior right hard palate involving the entire right maxillary sinus in a 47-year-old female patient. Diagnosis was done on the basis of clinical examination, radiographic evaluation histologic features and pre-operatively. This paper also describes the management of the case with a brief review of literature of ACC.

A Giant Desmoplastic Variant of Ameloblastoma of Mandible: A Case Report of Rare Odontogenic Neoplasm

Dr. Vineeth Kumar V.

Abstract

Desmoplastic ameloblastoma is a rare variant that accounts for approximately 4–13% of ameloblastoma, displaying significant differences in anatomical site, imaging, and histologic appearance. It has been included in WHO classification of head and neck tumour (WHO-2005) as a variant of ameloblastoma. The tumour resembles benign fibro-osseous lesion of jaws as a mixed radiopaque-radiolucent lesion. We present a case of desmoplastic variant of ameloblastoma in a 38-year-old male with a painless swelling in the right side of mandible. A mixed lesion with multilocular appearance was evident on both panoramic radiographs as well as computed tomography scan. An incisional biopsy confirmed it to be a case of desmoplastic ameloblastoma. Segmental mandibulectomy was performed from teeth 36 to right side anterior border of ramus and reconstructed using pre adapted right angled recon plate in a stereolithographic model. The patient is on routine follow-up.

A Unique Case of Bilateral Odontogenic Keratocyst in a Non-syndromic Patient

Dr. Aprajeeta Kaushik

Bharati Vidyapeeth Dental College and Hospital, Sangli, Maharashtra

Abstract

The Odontogenic Keratocyst (OKC) is a developmental, non-inflammatory chronic cystic lesion which on radiograph, may be unilocular or multi locular. OKC is a cyst of odontogenic origin, usually asymptomatic, with an aggressive clinical behaviour including a high recurrence rate and tendency to invade bone and adjacent soft tissues. Diagnosis is based on the clinical history, clinical appearance, radiographs and histology. A case of bilateral odontogenic keratocyst in a non-syndromic patient is presented in this paper emphasizing on the characteristics and various features of OKC, the conservative treatment protocol for OKC, based on the postoperative results, enucleation followed by open packing would be a possible choice in view of the simplicity of surgical procedure and low morbidity. This treatment modality has a low recurrence rate and may be particularly useful in young patients and patients with advanced systemic disease not amenable to major surgical intervention.

Keywords Keratocystic odontogenic tumour, Nomenclature, Odontogenic keratocyst, Odontogenic cyst, Odontogenic tumours, Enucleation, Conservative

Hybrid Odontogenic Tumor: Report of a Rare Dual Pathology

Dr. Kukkamudi Joseph

Dasmesh Institute of Research and Dental Sciences

Abstract

Introduction

Odontogenic tumors are characterized by diverse biologic behaviour and different histologic types. Hybrid odontogenic tumors are tumors which show two or more histologic types in a single tumor. Diverse differentiation potentials in the odontogenic epithelial cells may be implicated in the formation of hybrid odontogenic neoplasms. While adenomatoid odontogenic tumor is an uncommon tumor of odontogenic origin, the presence of a concurrent ameloblastoma is extremely rare.

Case Report

The present case is of a hybrid tumor composed of adenomatoid odontogenic tumor and plexiform ameloblastoma arising in the posterior maxilla of a 52-year-old female patient.

Discussion

Adenomatoid odontogenic tumors are often misdiagnosed as odontogenic cysts. Complicated clinicopathologic features can make the histopathological diagnosis a challenge. In such a scenario, immunohistochemical examination of the tumor cells can help in detecting specific tumor markers. A positive reaction with certain cytokeratins is characteristic of an adenomatoid odontogenic tumor. In the present case the tumor was immunopositive for CK 5/6 and negative for CK7. Histologically features of both adenomatoid odontogenic tumor and plexiform type of ameloblastoma were seen.

Conclusion

Unusual combinations of neoplastic components are occasionally observed as in the present case and the role of immunohistochemical profiling cannot be overlooked in formulating a final diagnosis.

Compound Odontomes in Mandibular Posterior Region: 2 Case Reports

Dr. Wagle Rohinee Bhagwat

CSMSS Dental College and Hospital, Kanchanwadi, Aurangabad

Abstract

Background

Odontomes generally appear as small, solitary or multiple radio-opaque lesions found on routine radiographic examinations. Traditionally odontomes have been classified as benign odontogenic tumor and are sub-divided into complex and compound odontome morphologically.

Case Report

This paper describes 2 cases of compound odontomes in mandibular posterior region in female patients referred from Department of Orthodontics. A panoramic radiograph showed presence of a lesion formed by radio-opaque small tooth like structures. A surgical excision performed and PRF placement done in both cases for soft and hard tissue healing.

Result

Satisfactory soft and hard tissue healing achieved and early diagnosis allowed less complex and expensive treatment.

Conclusion

Early diagnosis and complete removal of odontomes ensures better prognosis.

Gorlin-Goltz Syndrome: Case Series

Dr. B. Krishnambigai

Tamilnadu Government Dental College and Hospital Chennai

Abstract

Introduction

Gorlin-Goltz syndrome is also known as nevoid basal cell carcinoma syndrome. It is an autosomal dominant disorder characterized by a predisposition to neoplasms and other developmental abnormalities. This condition is linked to a mutation in the PTCH tumor suppressor gene.

Methods and Methodology

In Indian scenario, Gorlin-Goltz syndrome has been rarely reported. The clinical, radiological, and histopathological findings and major and minor criteria in five cases of gorlin goltz syndrome have been presented.

Discussion

The diagnostic criteria of nevoid basal cell carcinoma syndrome requires the presence of two major/one major and two minor criteria. Major criteria include the presence of more than two basal cell carcinomas or one under the age of 20 years, histologically-proven KCOT of the jaw, cutaneous palmar or plantar pits and bifid, fused ribs. Minor criteria, includes congenital malformations (cleft lip or palate, frontal bossing or moderate or severe hypertelorism), skeletal and radiological abnormalities (bridging of sella turcica and vertebral anomalies), ovarian fibroma and medulloblastoma.

Conclusion

Early diagnosis of this syndrome is important for counseling of patients to prevent harmful exposure to UV and ionizing radiations that increase the risk of developing BCC. Regular follow-ups by multispecialists can be offered to prevent substantial morbidity of the patient.

Reference

1. Lata J, Verma N, Kaur A. Gorlin-Goltz syndrome: A case series of 5 patients in North Indian population with comparative analysis of literature. *Contemp Clin Dent*. 2015 Sep;6

Eagle Syndrome: A Rare Entity

Dr. Soya Alfred Xavier

Department of Maxillio Facial Surgery, Saveetha Dental College, Chennai

Abstract

Eagle's syndrome is a condition associated with the elongation of the styloid process or calcification of the stylohyoid ligament, clinically characterised by throat and neck pain, radiating to the ear. In this report, we describe the case of a 51 year-old man who presented with a severe unilateral trigeminal and glossopharyngeal neuralgia. The patient was subjected to conservative therapy for four months and did not report improvement of the symptoms. After several consultations with different physicians, a diagnosis was accomplished by radiological investigation (multidetector computer tomography with multi-planar reconstructions and 3D volumetric reconstructions). Surgical styloidectomy was performed, with subsequent sudden remission of symptoms. Eagle's syndrome represents a commonly unrecognised nosological entity, clinically characterised by non-specific cranio-

facial pain. Differential diagnosis includes glossopharyngeal and trigeminal neuralgia, temporal arteritis, migraine, myofascial pain dysfunction and cervical arthritis. Eagle's syndrome should always be suspected, mostly in adult women when the pain is unilateral and not responsive to painkillers.

Peripheral Cemento-Ossifying Fibroma of Anterior Mandible

Dr. Swetha Vishwesh Bhat

Saveetha Dental College, Chennai

Abstract

Peripheral cemento-ossifying fibroma (PCOF) is a rare neoplasm of osteogenic origin that is seen as an overgrowth on the gingiva. It is considered to be more reactive than neoplastic in nature. Biopsies have been the gold standard for the diagnosis of such lesions due to its heterogeneous clinical and radiographic characteristics. It is prevalent in adolescent and young adults occurring more often in females than in males. We present two rare cases of peripheral cemento-ossifying fibroma of the mandibular anterior region in male patients. It was treated by surgical excision with underlying periosteum under local anaesthesia and followed up for six months. We discussed the clinical, radiological and histopathological features with their differential diagnosis in this following paper.

Post Covid Mucormycosis: Our Experience

Dr. Aishwaraya

S. Nijalingappa Institute of Dental Science and Research

Abstract

Background

The recent emergency of the corona virus disease had been associated with fungal infection as such aspergillosis and mucormycosis especially among critically ill patients treated with steroids and oxygen therapy.

Aims and Objectives

To evaluate the predisposing factors and oral manifestations of *Mucor mycosis* in post covid 19 patients.

Material and Methods

This study was conducted on 20 patients who came to the Department of OMFS, HKESNDC, Kalaburagi. Patients who had clinical recovery from covid 19 and had presented with oral symptoms are included.

Results

The major comorbidities were diabetes mellitus followed by hypertension. All the patients were on steroids and oxygen was used in 75% patients. Mobility of the maxilla, tooth was noted in all the patients and 80% had sinus opening and edematous gingiva,

Conclusion

Mucor mycosis is an angio invasive fungal infection. The disease has surged in the second wave of covid due to uncontrolled diabetes and use of oxygen for the treatment of covid 19. It requires multidisciplinary approach and prompt treatment at the earliest followed by reconstruction of the resected part with appropriate prosthetics.

References

1. Mishra Y, Prashar M, Sharma D, Kumar VP, Tilak TV. Diabetes, COVID 19 and mucormycosis: Clinical spectrum and outcome in a tertiary care medical center in Western India. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*. 2021 Jul 1;15(4):102,196
2. Rao VU, Arakeri G, Madikeri G, Shah A, Oeppen RS, Brennan PA. COVID-19 associated mucormycosis (CAM) in India: a formidable challenge. *British Journal of Oral and Maxillofacial Surgery*. 2021 Jun 29.

Post-covid versus Non-covid Rhino-Orbital-Maxillary Mucormycosis

Dr. Shivani Kumari

Abstract

Mucormycosis occurs in immunocompromised hosts with uncontrolled diabetes, solid organ transplants, and hematologic malignancies. Primarily the disease involves paranasal sinuses and progresses to involve craniofacial compartments via direct extension or angioinvasion. The Covid-19 infection caused by the novel SARS-CoV-2 has been associated with wide range of disease patterns, ranging from a mild cough to life-threatening pneumonia. The diffuse alveolar damage with severe inflammatory exudation, Covid-19 patients have reported with a decrease in CD4+ T and CD8+ T cells resulting in overall immunosuppression which favours opportunistic invasive fungal infection that invades paranasal sinuses, rhinal, orbital, maxillary, occipital and cerebral areas. The management strategy for rapidly progressive fulminant disease is swift commencement of multidisciplinary approach with rapid initiation of an aggressive multifaceted surgical and medical treatment that can confer an improved overall prognosis. It has been found to be rapidly fatal with a mortality rate of 32–70% as per organ involved even after aggressive antifungal therapy, surgical debridement, and correction of underlying processes. Majority of operated mucormycosis cases had systemic complications of multi organ failure in post-operative phase when compared with non-COVID cases. The presence of angiotensin-converting enzyme 2, a receptor of SARS-CoV2 in the lung, heart, kidney, testis, liver, lymphocytes, and nervous system was confirmed and there have been controversial findings about observation of SARS-CoV2 RNA in these organs. Moreover, the multiorgan failure may be induced by the cytokine storm, due to increased levels of inflammatory-mediators, endothelial-dysfunction, coagulation abnormalities, and infiltration of inflammatory cells into the organs.

Unusual Presentations of Tuberculous Osteomyelitis over Mid Face: A Rare Entity

Dr. Niveda Jith K. V.

All India Institute of Medical Sciences, Raipur

Abstract

Tuberculosis is a chronic granulomatous infection caused by *Mycobacterium tuberculosis*. It is a significant health problem in India, and India has the largest number of TB patients globally. Osteomyelitis infections of the midface are very rare due to their rich

vascular supply. Also, oral manifestations of tuberculosis are infrequent and difficult to diagnose. But being in India and from our experience, any osteomyelitis infection of the oro-facial region should include *Tuberculous osteomyelitis* in our differential diagnosis. The oral and maxillofacial division of the Department of Dentistry at AIIMS Raipur managed a few cases presenting with osteomyelitis of the midface region. In both cases, early diagnosis and anti tubercular regimen controlled further spread of infection. This presentation focuses on methods we have used for the early diagnosis of TB osteomyelitis and both medical and surgical management to prevent the spread of infection.

Melanotic Neuroectodermal Tumor of Infancy: A Rare Pathological Entity in Infants

Dr. Richa Sharma

Bharati Vidyapeeth Dental College and Hospital, Pune

Abstract

Introduction

Melanotic neuroectodermal tumour of infancy (MNTI) is an uncommon, rapidly growing neoplasm that primarily develops in the jaws of infants. The lesion was originally described by Krompecher as a congenital melanocarcinoma. MNTIs are derived from the neural crest, and appear in areas that develop from neuroectodermal pathways; the most common of these is the maxilla. Locations in other intraosseous and extraosseous structures have been characterized, including the mandible, skull, brain, and epididymis. Malignant behaviour has been reported in 6.5% of MNTIs (Kruse-Lösler et al., 2006).

Summary

Melanotic neuroectodermal tumor of infancy is a tumor with a strong predilection for the head and neck of children. When presenting within the jaw, the mass may be brown or bluish colored, a valuable clinical clue to MNTI. Imaging and incisional biopsy in a young patient, particularly an infant, may require coordination with an anesthesia service, which can delay the final diagnosis. Melanotic neuroectodermal tumor of infancy occurring in the jaw is often managed primarily or in concert with an oral and maxillofacial surgeon or an otolaryngologist, depending on access to these specialists in one's area of practice.

A Rare Case of Osteoid Osteoma in the Pre-auricular Region

Dr. Janhavi Lahane, Prof. Dr. Newaskar Vilas

Government Dental College, Indore

Abstract

Introduction

Osteoma is a benign tumour which consists of mature bone tissue. It is a rare lesion when it occurs in the bones of the craniofacial complex.

Aims and Objectives

To discuss the presentation and management of a case of osteoid osteoma in the pre-auricular region.

Materials and Methods

A 35-year-old male presented in the department of oral and maxillofacial surgery as an outpatient with complaints of a painful

swelling in the pre-auricular region for the past. It was initially small in size and gradually increased to the present size. Investigations performed include a 3D CT Face and orthopantomogram. Finally, the patient underwent excision. Post-op biopsy revealed the mass to be an osteoid osteoma.

Result

Preauricular swellings must be diagnosed appropriately at an early stage and prompt management ensures least morbidity for the patient.

Discussion

Osteoma is a benign osteogenic tumour involving compact or cancellous bone proliferation and arising from periosteum (peripheral osteoma), endosteum (central osteoma) and even extra-skeletal soft tissue. Although the exact cause is yet not known, osteomas are formed when there is uninhibited growth in a bone. An osteoid osteoma of the pre-auricular region is a very rare occurrence.

Summary and Conclusion

Pre-auricular swellings should be diagnosed at an early stage for effective management. Useful investigations include 3D CT Face and orthopantomogram.

Vascular Lesion of Maxillofacial Region

Dr. Shivkumar Chopane

AIIMS Jodhpur

Abstract

Introduction

Vascular anomalies are lesions arising from the arterial and/or venous and/or lymphatic circulation. There persistence in adulthood however presents as a challenge to the physician. Most of the case reports of vascular lesions have been presented in relation to lips, tongue and some in the palate. In this case series we will present two cases about vascular lesion in the maxillofacial region associated to zygoma and mandible and its management in detail.

Case Study

Case 1—Harikishan 21 year male present with of swelling in right malar region since 6 years. c/o Intraosseous Haemangioma in relation to Right Zygomatic region. Treatment-Resection of tumor in toto Reconstruction with Patient specific implant under GA.

Case 2—Shetan Singh 19 year male patient complains of pain in left side lower jaw since 4–5 months. c/o Aneurysmal Bone cyst in relation to Left mandible. Treatment-Resection + reconstruction with Free Fibula flap (double barrel).

Discussion

In case of vascular lesion associated with maxillofacial region we have to consider various factors like esthetic, function, cost of the treatment, early and correct diagnosis and management. Relevant diagnostic studies included simple OPG, PA view, CECT scan, MRI and Diagnostic Angiography. Preoperative embolization was done followed by resection and reconstruction.

Conclusion

Early diagnosis and treatment of such condition is utmost importance because of complications and may require aggressive resection surgery and reconstruction.

Tyrosine Kinase Inhibitor for the Treatment of Post Covid IPF Catalysing Necrosis of Jaw Bones with Features Mimicking *Mucor mycosis*: A Case Report

Dr. Arun S.

Manipal College of Dental Sciences, Manipal

Abstract

Introduction

Literature has documented various drugs and their interactions leading to Medicine related osteonecrosis of the jaw bones. These classes of drugs are used cautiously to eliminate their undesired effects. Tyrosine kinase receptor (TKR) inhibitors are used in cases of Idiopathic pulmonary fibrosis and through this case report, we are documenting the first available evidence for its bone toxicity leading to osteonecrosis of the jaw.

Materials and Methods

A 33-year-old male diabetic patient was diagnosed with Covid 19. Patient developed idiopathic pulmonary fibrosis and was treated with TKR for a period of one month. Once recovered and fit, the patient had symptoms of upper anterior jaw pain with associated pus discharge and was diagnosed with necrosis of the anterior maxilla and underwent surgical resection for the same.

Discussion

Adverse effects of TKRs are documented in the drug pharmacology reviews. Toxicology studies in rats and monkeys show evidence of bone toxicity. However nil evidence is available in the literature which mentions about the bone toxicity in humans. In this case, the differentials of *Mucor mycosis* and avascular necrosis of the jaw were made. After histopathological and culture reports excluded the presence of any fungal growth, the final diagnosis of MRONJ because of long-term administration of TKRs was made.

Conclusion

This case report serves as the first documented evidence of jaw necrosis in humans after prolonged usage of TKRs. Even though this is an isolated occurrence, a very potent drug with a wide variety of usage in the field of pulmonary medicine has been shown to have adverse effects. This will help the pharmacologists and doctors equally to moderate the usage of this drug, thus enhancing its usefulness to outweigh the hazards.

Efficacy of Pentoxifylline and Tocopherol in the Management of MRONJ

Dr. Sumera Gul

Government Dental College Srinagar

Abstract

Introduction

Medication-related osteonecrosis of jaw (MRONJ) is a significant complication seen in patient's receiving anti-resorptive medication resulting in jaw necrosis. The prophylactic and therapeutic use of

PENT-E in the management of MRONJ has grown interest because of their efficacy in its management.

Aims and Objectives

Eight (Stage 0–Stage II) cases of MRONJ were provided PENT-E for a mean period of 12–16 months and the efficacy was evaluated in terms of clinical relief of symptoms and radiographic evaluation.

Result

Seven out of eight patient's presented with clinical relief in symptoms and improvement in radiographic presentation whereas one case showed no significant improvement.

Conclusion

PENT-E could be a safe and effective prophylactic and therapeutic adjunct in the management of MRONJ.

A Giant Pleomorphic Adenoma of the Palate: Our Experience and Review of Literature

Dr. Rahul Mukul Chaubey, Dr. G. Srikanth

Manipal College of Dental Sciences, Manipal

Abstract

Introduction

Pleomorphic adenoma is the most common tumour of the major and minor salivary gland, approximately 40–70% of all minor salivary gland tumours are pleomorphic adenomas. The parotid gland is the most common site; however, the most prevalent intra-oral site is the palate, followed by buccal mucosa and upper lip. It is also known as a mixed tumour that contains both epithelial and mesenchymal tissues, which begins embryonically. It is a rare benign tumour; however, it can undergo malignant transformation to form carcinoma Ex-pleomorphic adenoma.

Case Report

A 54-year-old female patient presented to the department of OMFS, MCOFS, Manipal with a complaint of growth wrt right side of the palate since the last 40 years. FNAC and incisional biopsy were done which was suggestive of benign salivary gland tumour pleomorphic adenoma. The patient was managed via wide local excision and infra-structural maxillectomy. Considering the size, anatomical location, extent, long-stranding nature of swelling and its vicinity to the airway, reconstruction post-resection was a challenge. Patient-specific 3D implants were used for reconstruction. The patient was discharged uneventfully on postoperative day 8 and there is no recurrence on 1-year follow-up.

Conclusion

Pleomorphic adenoma of the hard palate is usually seen in adults. Definitive diagnosis lies in histopathological examination. CT is necessary for ruling out any bony erosion. Treatment is by wide local excision and strict subsequent follow-up.

Desmoplastic Ameloblastoma of the Mandible: A Rare Case Presentation

Dr. Shashank Madhusudan

Hosmat Hospital Pvt. Ltd

Abstract

A large ameloblastoma with prominent stromal ossification is reported. The patient was a 19-year-old Indian male with diffuse swelling of the mandible from the left lateral incisor to the right molar region. Radiographic examination showed a radiopaque mass suggestive of a fibro-osseous lesion. However, histologic examination revealed the lesion to be a variant of an ameloblastoma. The stroma was abundant, with prominent formation of bone trabeculae rimmed by osteoblasts. Differentiation of mesenchymal cells into active osteoblasts with formation of new bone trabeculae was frequently found in the stroma. The prominent stromal bone formation appeared to be reactive in nature, although it remains uncertain whether this type of ameloblastoma can be regarded as a discrete clinicopathologic entity.

Carnoy's Solution

Dr. Chandralekha, Prof. Dr. Pradeep Christopher Jesudas

Thai Moogambigai Dental College and Hospital

Abstract

Introduction

Carnoy's solution described by Voorsmit (1981) contains 100% ethanol, chloroform and glacial acetic acid in a 6:3:1 ratio with added ferric chloride. This chemical composition has got tissue cauterization property. In maxillofacial surgery it is mainly used as a cauterizing and fixating agent that penetrates cancellous spaces in the bone following the enucleation of cystic lesion and benign tumors to prevent the recurrence rate.

Aim and Objectives

To understand the efficacy of use of Carnoy's solution, as a means of chemical curettage, for treating the cystic and benign tumours of oral cavity.

Materials and Methods

Enucleation followed by Carnoy's solution application over the lesion for 3 min. Patient followed up for 1st month, 3rd month, 6th month, 1 year and two years with computed tomography.

Results

The patient followed up did not show any recurrence for a period of 2 years.

Discussion

The importance of application of Carnoy's solution is to cauterize the pathologically infiltrated tissue in the bone and hence these preserves and saves the unaffected bone to maintain the normal contour and architecture.

Conclusion

The combination of treatment with enucleation and the application of Carnoy's solution to the bony cavity for no more than 3 min, appears to be efficient for treating KCOT by diminishing the recurrence rate to 0% during the most critical period (the first 3 years) and its equal to that of the resection.

References

1. Role of Carnoy's solution in the treatment of keratocystic odontogenic tumor: A systematic review. Journal section: Oral Surgery Publication Types: Review. <https://doi.org/10.4317/medoral.21250>
2. Modified Carnoy's Compared to Carnoy's Solution Is Equally Effective in Preventing Recurrence of Odontogenic Keratocysts. <https://doi.org/10.1016/j.joms.2021.03.010>

The Strife with Conservative and Aggressive Management of Odontogenic Keratocyst (OKC): A Clinical Experience with 55 Cases

Dr. Donnipad Raghavendra Narayana Rao

Sudharustagi College of Dental Sciences

Abstract

Aim

Study aimed at presenting different treatment modalities and its association with the recurrence rate of OKC.

Materials and Methods

55 patients diagnosed with OKC reported to outpatient department. Histopathological variant was confirmed by incisional biopsy and cytology. Patients suffering from multiple cysts (Nevoid Basal cell carcinoma) was excluded from the study. Orthopantomogram and CT scans were performed to assess and correlate the findings with the histopathological examination for narrowing the differential diagnosis. In the study, OKC showed male predominance with a male: female ratio of 23:7 of the total cases, 20 (36.36%) patients had Para keratinised OKC and the rest 25 (45.5%) patients had orthokeratinised OKC. 7 (12%) patients were reported with recurrence of the tumour within 1–2 years of surgery—all these patients had Para keratinised cyst. No recurrence was seen in patients treated with resection; however only one out of three patients treated with enucleation, followed by fixation with Carnoy's solution showed signs of recurrence. The histopathological examination determined the aggressive nature of KCOT and its association with the recurrence rate as well. The findings of our study indicate that more aggressive treatment can aid in reducing the chances of recurrence.

Inverted Sinonasal Papilloma: Report of a Rare Case

Dr. Joseena James Abraham

PMS College of Dental Science And Research

Abstract

Introduction

Sinonasal papilloma is a rare locally invasive benign tumor with incidence rate of 0.6 cases/100,000 people/year. Collectively, it represents < 5% of all sinonasal tract tumors. In 1854, Ward first documented the occurrence of inverted papilloma in the sinonasal cavity. They are benign tumors that are found in three histologic types: the squamous papilloma, the inverted papilloma, and the cylindrical cell papilloma of these three types, the inverted papilloma has a 15% incidence of becoming a squamous cell carcinoma, while the cylindrical cell papilloma will histologically resemble an adenocarcinoma. The tumor is well known for its invasiveness, tendency to recur and association with malignancy. Our aim is to understand the progression, pathology, diagnosis and management of inverted Sino nasal papilloma.

Case Report

A rare case of Sino nasal papilloma in a 53-year gentle man who reported to our department with the chief complaint of pain and swelling in the left side of face for 2 months is presented.

Conclusion

One can suspect inverted papilloma if mass in nasal cavity seems to be arising from lateral nasal wall, with involvement of at least 1 paranasal sinus, presenting in male patient of the fifth and sixth

decade of life. Recurrence rates of inverted papilloma are unacceptably high, which actually represents residual disease in most cases.

Mucor mycosis Cases Operated at Our Centre Using Conservatively Radical Approach Looking at Patient's Perspective: AIIMS Raipur Experience

Dr. Chakshubajaj, Dr. Manish Jagdish Raghani

AIIMS, Raipur

Abstract

Mucor mycosis is a highly invasive fungal infection afflicting predominantly the immunocompromised patients. The genera responsible for human infection are *Rhizopus*, *Mucor*, *Rhizomucor*, *Cunninghamella*, *Lichtheimia* and *Apophysomyces*. The principal risk factors for mucormycosis include diabetes mellitus (DM), with or without ketoacidosis, hematological malignancies, organ transplant, chronic kidney or liver disease, immunological disorders, prolonged corticosteroid therapy, deferoxamine therapy and trauma. Recently, with the second wave of COVID-19, the Indian subcontinent has witnessed a dramatic rise in *Mucor mycosis* infection in patients recovered from COVID-19. This association has been documented in various case reports/case series and institutional experiences. Therefore, the aim of the present paper is to provide an overview on how we have managed all the cases of Rhino-maxillary/Rhino-orbito-maxillary/Rhino-Cerebral *Mucor mycosis* as an oral and maxillofacial surgeon keeping conservative cum radical approach concept and preserved the thick keratinized palatal and labio-buccal alveolar mucosa which was uninvolved clinically unlike other specialities approach where radial excision of relatively uninvolved mucosa was done for *Mucor mycosis*. Unlike malignancy, in *Mucor mycosis* we can preserve the palatal and alveolar mucosa, which will help us in post resection prosthetic rehabilitation, thereby benefiting the post-operative outcome for patients.

Unicystic Ameloblastoma: A Quagmire?

Dr. Suri Raja

PMS College of Dental Science and Research

Abstract

Introduction

A major aspect of oral and maxillofacial pathology includes odontogenic cysts and tumour. Odontogenic cysts are encountered relatively common in dental practice whereas Odontogenic tumors, are uncommon. The unicystic ameloblastoma has always been considered as a special category due to its varying clinical and pathologic features. Studies have proven that Unicystic ameloblastomas account for about 10–46% of all intraosseous ameloblastomas.

Case Report

A 10-year-old boy reported to the department with chief complaint of swelling in left side of his face for 2 months. Swelling gradually increased to the present size of 3 × 3 cm. Submandibular lymph nodes were enlarged and tender. Intraorally lesion extends from 36 region to anterior part of ascending ramus with a size of 4.5 × 4.5 cm with obliteration of buccal mucosa on 36. OPG reveals well defined radiolucent lesion with same extension and is 1.5 cm away from

inferior border of ramus and has impacted tooth buds of 4748 which were displaced posteriorly. After pre surgical planning, the lesion was curetted out and chemical cauterisation was done sparing segmental resection of mandible. Second recurrence occurred and was curetted out under LA. Subsequent follow up showed regression of lesion and bone deposition.

Summary

The diagnosis of ameloblastoma is made only after microscopic examination of the presumed cyst. If ameloblastoma are confined to the lumen of the cyst with or without intraluminal tumour extension, then the cyst enucleation has probably been adequate treatment.

Case Series of Rhino-Cerebral Mucormycosis Occurring in Diabetic Patients

Dr. Venkateshpraveen

Sree Mookambika Institute of Dental Sciences

Abstract

Introduction

Mucor mycosis is an invasive fungal infection occurring in patients with or without pre-existing medical illnesses. During the ongoing coronavirus disease 2019 (COVID-19) pandemic, there have been increasing reports of bacterial and fungal coinfections among some COVID-19 patients with pre-existing comorbid illnesses such as diabetes and hypertension. The management of this dreaded fungal infection demands early and prompt surgical intervention to thoroughly remove the infected tissue and necrotic material to reduce the tissue burden of this invasive organism. This should be accompanied by expeditious initiation of amphotericin B along with supportive therapy. Here we present three cases of rhino-orbital *Mucor mycosis* in patients with COVID-19, all of whom presented with orbital and facial swelling under the backdrop of COVID-19 symptoms in the form of intermittent fever.

Aims and Objective

Our treatment strategy comprised of an expeditious use of early surgical intervention and amphotericin B along with the control of cytokine storm and hyperglycaemia.

Materials and Methods

3 surgical cases, done under general anaesthesia.

Results

Our treatment strategy of early surgical intervention followed by amphotericin-B and diabetic control was well tolerated by all three patients. All the patients are under follow up for more than 6 months. Prosthetic rehabilitation being planned for all the patients.

Summary and Conclusion

Early diagnosis of COVID-19 *Mucor mycosis* through sharp clinical acuity and initiation of early surgical intervention seems to be the key to control this disease burden and prevent its numerous debilitating complications.

Intramuscular Haemangioma of Masseter Muscle: An Uncommon Case Report with Review of Literature

Dr. Patel Harshini Ajaykumar

KLE Vishwanath Katti Institute of Dental Sciences

Abstract

Introduction

Intramuscular haemangiomas are uncommon neoplasm arising most frequently in the masseter. Due to its location, it could be mistaken for a parotid swelling or even submasseteric space infection. It is difficult to achieve pre-operative diagnosis in such cases on the basis of clinical examination. A case of intramuscular haemangioma in a 25-year-old female is presented in this paper.

Aims and Objectives

In this paper, the main objective is to highlight the diagnosis, treatment and complications of the above case and also other treatment modalities available for haemangioma and its possible complications.

Material and Methods

In this case intralesional sclerotic agent was injected at 4-day interval initially for 1 month and gradually as the swelling decreased, the time interval for injecting the sclerosing agent was also increased. Inj. polidocanol was used as a sclerosing agent. Few measurements were taken during every follow up and were compared.

Results

There was subsequent decrease in swelling over the angle region. Although there was mild discoloration and necrosis of the skin overlying the lesion during the 3rd month of follow up.

Discussion

Sclerotherapy with polidocanol is a minimally invasive modality of treatment with negligible side effects. Patient compliance is high with very little or no morbidity. No anaesthesia is required for most patients and hospital stay is also reduced.

Conclusion

It is apparent that sclerotherapy is a valuable treatment option in the management of head and neck haemangiomas.

The Use of Submental Flap for Reconstruction of Defect in a Patient with Sublingual Hemangioma

Dr. Sushobhan Prabir Das

Rural Dental College, Pravara Institute of Medical Sciences

Abstract

Vascular anomalies are congenital errors in vascular development. They frequently involve the head, neck, and oral cavity. The paper focuses on a case where submental flap was utilized to reconstruct defect post-surgical excision of hemangioma. The aim is to focus on submental flap as an effective reconstructive alternative for defects in the oral cavity. The submental flap yielded splendid results as far as flap adaptation and viability were concerned. Patient had a scar mark in the neck region which eventually will subside with time. The submental artery flap is a valid option for reconstruction of small to moderate-sized oral cavity defects. It represents a reasonable alternative to free flaps. Cervical skin has similarities with facial skin, and because this is a regional flap, it helps eliminate microsurgical risks. The submental island flap has reliable blood supply, and could be harvested simply and rapidly. The submental artery island flap is easy to dissect and has acceptable donor site appearance.

Early Diagnosis of Infantile Hemangiomas in Children Refractory to Propranolol Therapy Using Doppler Ultrasound: A Prospective Study

Dr. Rathindra Nath Bera

Faculty of Dental Sciences IMS BHU

Abstract

Background

Currently propranolol is an effective method for treatment of symptomatic hemangiomas. Doppler Ultrasound can be useful for early response assessment with the help of Resistivity index, Pulsatility index and Peak systolic Volume. The aim of this present study is to utilize USG with colour Doppler in response assessment of Infantile Hemangiomas.

Methods

Clinical response to treatment was assessed 3 months following treatment initiation and 3 months after completion of treatment. The lesions were also reassessed using ultrasound at every 3 months interval. The radiological parameters; RI, PI and PSV were compared with the intermediate and FCR. The utility of change in Doppler indices (RI, PI, PSV) in terms of clinical response to the therapy was predicted by using ROC (receiver operating characteristic) curve. A *p*-value of less than 0.05 was considered statistically significant.

Results

On comparing the final clinical response (FCR) to sonographic parameters at 3 months the RI and PI values for excellent and partial response group was significantly better compared to non-response group (*p* value < 0.001). Patients who were initially non-responder but had better clinical response (excellent/partial) at FCR had a significantly greater increase in RI and PI values at 3 months. However, patients who remained non-responder (21 patients) even at FCR had an insignificant increase in RI and PI (*p* value = 0.069 and 0.063 respectively).

Conclusion

RI had a sensitivity and specificity of 95% and 86%. PI had 81% and 86% sensitivity and specificity respectively. Doppler ultrasound can help in early detection of refractory cases.

Reference

- Shi H, Song H, Wang J et al. Ultrasound in Assessing the Efficacy of Propranolol Therapy for Infantile Hemangiomas. *Ultrasound Med Biol.* 2014 Nov 1;40(11):2622–9

Ameloblastoma: Resection versus Decompression

Dr. P. Swetha

Krishnadevaraya College of Dental Science

Abstract

Ameloblastoma is a benign odontogenic tumour commonly seen in mandible. It originates from cell rests of enamel organ, either remnants of dental lamina or Hertwig's sheath. We report a case of mandibular ameloblastoma in an adult. The patient was 23 years old female who noticed swelling in right lower back tooth region for 2 months. Orthopantomogram showed a well-defined multilocular radiolucent area measuring 5 × 5 cm with corticated border present in the right body of mandible and resorption noted w.r.t 46 47. Dredging

and curettage was performed under general anaesthesia. No recurrence has been observed since 2 years after surgery.

Reference

- Shafer's Text Book Of Oral Pathology

Category: Reconstructive Surgery

Microvascular Anastomosis: Is Suture-Less Anastomosis a Better Alternative Option for Conventional Suturing? Randomised Control Study

Dr. Kathiravan Selvarasu

Saveetha Dental College and Hospital, Tamilnadu

Abstract

Free flaps are considered as gold standard for addressing any kind of faciomaxillary defects. Successful outcome of flap surgery predominantly depends on microvascular anastomosis. When the ischaemic time for the flap falls within the limits (maximum 111 min) the results become predictable. There are various factors involved in the free flap reconstruction however, the performance of faster anastomosis with minimal or no damage to the vessel walls contributes to the successful results. This paper discusses the various methods of anastomosis and compares with the conventional micro suturing using similar parameters.

Aim

Study aims at comparing the efficiency and effectiveness of conventional suturing methods over non-suturing anastomotic methods for microvascular venous anastomosis.

Materials and Methods

Multicenter randomised control study enrolling.

Inclusion Criteria

Patients who reported for reconstruction of hard and soft tissue maxillofacial defects.

Exclusion Criteria

Patients with known history of systemic co-morbidities, vascular diseases, or diagnosed with abnormal anatomical variations of the indicated donor site. Patients were segregated into five groups based on various methods used in venous anastomosis:

- Conventional suturing: Group I.
- Fibrin sealant reinforced micro suturing: Group II.
- Couplers: Group III.
- Staplers: Group IV.
- LASER assisted vascular Anastomosis (LAVA): Group V.

Parameters used for assessment: 1. Flap ischaemic time, 2. Patency 3. Leakage, 4. Intra operative anastomotic time.

Conclusion

Based on the results of the study, non-suturing techniques have proved to be an effective and efficient alternative to conventional suturing techniques for venous anastomosis.

S. No. 45 Free Fibula Flap in Head and Neck Reconstruction: Our Experience of 300 Cases

Dr. Romir Navaneetham

Vydehi Institute of Dental Sciences

Abstract

Introduction

Management of head and neck reconstruction has undergone many significant changes during the past two decades. The purpose of this article is to demonstrate reliability and versatility of free fibula flap in head and neck reconstruction.

Materials and Method

A total of 300 patients reconstructed over 4 years for both benign as well as malignant pathologies involving both maxillary and mandibular arches using the free fibula flap were evaluated for form, function, reliability, survival of the flap and early complications that occurred over first 3 weeks post operatively.

Results

A male predilection of 63% to female predilection of 37% was seen. Mandibular reconstruction was needed in 246 patients and 54 patients needed maxillary reconstruction. The most common pathology being resected was squamous cell carcinomas (56%). Post operative complications were noted in 52 patients (17.3%) which included hardware failure in 16 patients, total or partial flap failure in 12 patients, flap dehiscence in 12 patients, recipient site infection in 7 patients, donor site infection in 5 patients. Donor site morbidity was noted in 6% of cases with calf paraesthesia and 13% showed a decrease in plantar flexion.

Discussion

The versatility in reconstructing both intraoral and extraoral defects, the large quantity of bone that can be shaped and adapted to maintain the contour of both maxilla and mandible. The reliable harvesting technique leads to minimal donor site morbidity thus making the free fibula flap an integral part of reconstruction in head and neck defects.

Donor Site Morbidity in Patients Undergoing Maxillofacial Reconstruction Using Free Fibula Flap Versus DCIA: A Systematic Review

Dr. Sanika S. Tidke

Dr. D. Y. Patil Dental College

Abstract

A systematic review of the literature on the donor site morbidity in patients undergoing maxillofacial reconstruction was performed. The two widely used flaps namely Free fibula flap (FFF) and DCIA flap were compared to answer the following questions: (1) Is donor site morbidity significantly different in patients undergoing Maxillofacial reconstruction with FFF and DCIA flap? (2) Should donor site morbidity be considered as the criteria for choosing the flap for reconstruction. A systematic search of the English literature was performed of the PubMed, MEDLINE, Cochrane Library, and Embase databases. The study selection process was adapted from the PRISMA statement, and 7 articles were included after screening the articles. This systematic review followed the guidelines in PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) statement. A total of 7 studies were included in the qualitative

synthesis with total of 531 estimates. Three out of seven studies showed DCIA to have lesser complications at donor site than fibula group. While other two studies proved FFF to be better than DCIA. One study proved low donor site morbidity with regards to both the flap. Most of the studies have reflected minimal effect on function and quality of life after free fibula harvest in long term follow-up. However, one cannot neglect the advantages of hidden scar, low incidences of wound healing and lesser morbidity post-harvest in DCIA patients.

Patient-Specific Implants for Maxillofacial Defects: Challenges and Solutions

Dr. Pulkit Khandelwal

Rural Dental College, Loni, Ahmadnagar, Maharashtra

Abstract

Reconstruction of maxillofacial defects is quite challenging due to complex anatomy and cosmetic and functional effects on patients. The alloplastic implants and autogenous grafts are often associated with resorption, infection and displacement. Recent technological advances have led to the use of custom computer-designed titanium patient-specific implants (PSIs) in reconstructive surgery. Three dimensional (3D) planning/computer-aided-design (CAD) and virtual surgery has evolved to the point that it improves efficiency, accuracy, creativity and reproducibility in craniomaxillofacial (CMF) surgery. It enables a more accurate reconstruction of maxillofacial defects. Its main drawback is its high cost. This paper presents few cases of maxillofacial reconstruction with the help of customized 3D titanium patient-specific implants. Patients were surgically treated for post-COVID rhino-maxillary mucormycosis, odontogenic tumours, etc. by resection of diseased bone. Among all options available for reconstruction of post-surgical defect, Patient Specific Implants were preferred because of customized implant fit; greater accuracy with the added benefit of shorter rehabilitation. No complications were observed in any patient both immediately post-op and in subsequent follow-ups. All patients reported a high level of satisfaction with the final result both functionally and cosmetically.

The use of computer-designed PSI enables a more accurate reconstruction of maxillofacial defects, eliminating the usual complications seen in preformed implants and resulting in higher patient satisfaction. It offers higher accuracy and defect adaption, enhanced stability, more predictable outcomes, and better facial contour refinement.

References

1. Alasserri N, Alasraj A. Patient-specific implants for maxillofacial defects: challenges and solutions. *Maxillofac Plast Reconstr Surg.* 2020;42:15.
2. Owusu JA, Boahene K. Update of patient-specific maxillofacial implant. *Curr Opin Otolaryngol Head Neck Surg.* 2015;23(4):261–264.

An Innovative Technique of Mandibular Reconstruction Using Free Fibula Graft and Patient Specific Implant

Prof. Dr. Manojkumar K. P.

KMCT Dental College, Kozhikode

Abstract

Background

Restoring the anatomical shape and function of extensive mandibular defects is one of the most challenging and complex treatment in maxillofacial surgery since mandible has a complex 3-dimensional conformation. This study illustrates the use of virtual surgical planning (VSP) and computer aided design/computer aided manufacturing (CAD/CAM) in the fabrication of a pre-operative custom-made surgical cutting guide and titanium reconstruction implant that acts as a crib for fibula free flap in the surgical management of ameloblastoma.

Aim

To assess the role of VSP in mandibular reconstruction with fibula free osteocutaneous graft supported by patient specific implant.

Method

Cone beam computed tomography (CBCT) scan from a patient with ameloblastoma involving right mandibular body was elaborated to produce a virtual surgical plan of mandibular osteotomy for complete body resection. CAD/CAM technology was used to manufacture custom-made cutting guide for tumor ablation as well as for fibula graft and reconstructive implant to support fibula free flap.

Result

The mandibular symmetry in patient receiving the CAD/CAM prototyped patient specific implant aided by VSP was significantly better than that in a patient receiving conventional method.

Conclusion

This method improves the precision and efficiency of mandibular reconstruction while maintaining ideal contour, functional, esthetic outcome and improved quality of life.

References

1. Aini V, Gaba S, Sharma S, Kalra P, Sharma RK. Assessing the Role of Virtual Surgical Planning in Mandibular Reconstruction With Free Fibula Osteocutaneous Graft. *J Craniofac Surg*. 2019 Sep;30(6):e563–e566.
2. Ciocca L, Mazzoni S, Fantini M, Persiani F, Baldissara P, Marchetti C, Scotti R. A CAD/CAM-prototyped anatomical condylar prosthesis connected to a custom-made bone plate to support a fibula free flap. *Med Biol Eng Comput*. 2012 Jul;50(7):743–9.

Functional Reconstruction of Lateral Oral Tongue Defects Using Primary Z Plasty

Dr. Praveen Kumar S.

Goa Dental College and Hospital, Goa

Abstract

The tongue is paramount to natural speech and swallowing, and good tongue function is important in the overall quality of life. Tongue carcinomas are the most common oral carcinomas. The current treatment strategies for tongue carcinomas are mainly surgery-based comprehensive therapies. It is important to restore the anatomical form to achieve optimum function and aesthetics after ablative cancer

resection of tongue lesions. There are many reconstructive methods suitable for small or mid-sized defects, including primary closure or local flaps. For large defects micro vascular free tissue transfer have become the main stay of treatment. We describe a technique for achieving optimum tongue shape and function using Z-plasty for reconstruction of medium sized defects in the lateral mobile tongue defects. Secondary granulation or placement of skin graft or dermal substitutes results in thin, scarred and tethered tongue with distortion of speech. Our technique will negate these problems and achieve bulk and shape utilizing the native tongue tissue. Ten patients were treated using the above technique to achieve optimum speech and swallowing in comparison to patients who healed with secondary intension. Through this paper presentation we would like to share the technical details and pit falls of using primary z plasty in tongue defect closure.

Ablative Fractional CO₂ Laser Intervention for Post Surgical Scars on Face: A Case Study

Dr. Kavyashree

H.K.E.S.S. Nijalingappa Institute of Dental Sciences and Research Kalaburagi

Abstract

Background

Fractional CO₂ lasers one of the most effective methods of treatment options used to resurface scars.

Objectives

To evaluate the efficacy and safety of early treatment of post surgical facial scars by fractional ablative CO₂ lasers.

Methods

A total of 10 patients with recent post operative scars were enrolled in this study. Three sessions of fractional CO₂ laser with a month interval were started, 4 was after surgery. Patient reported their satisfaction using a subjective 4 point scale.

Results

Results demonstrated a significant over all improvement and greater satisfaction after laser treatment.

Conclusion

Fractional ablative CO₂ laser is an effective and safe treatment modality for surgical scars in the early post surgical period.

References

1. Eilers Jr RE, Ross EV, Cohen JL, Ortiz AE. A combination approach to surgical scars. *Dermatologic Surgery*. 2016 May 1;42:S150–6.
2. Elsaie ML, Choudhary S, McLeod M, Nouri K. Scars. In *Basics in Dermatological Laser Applications 2011* (Vol. 42, pp. 131–139). Karger Publishers.

Medial Femoral Condyle Corticoperiosteal Flap for Nonunions and Small Bone Defects in Maxillofacial Region

Dr. Pritika Srivastava

Sardar Patel Post Graduate Institute of Dental and Medical Sciences

Abstract**Background**

Healing in comminuted fractures poses the risk of delayed or non union affecting return to form and function. The use of a vascularised graft with periosteum and some bone stock which is mouldable is an ideal requisite in such instances. Medial femoral condyle flap proves to be one such option for reconstruction involving small to medium osseous defects and nonunions especially in situations where the size of the defect does not necessitate the use of the fibular flap.

Objective

To highlight the versatility of medial femoral corticoperiosteal flap in treatment of non-union and small bone gaps in maxillofacial region.

Methods

Two patients with bone defect due to gross comminution during the original injury were reconstructed with a corticoperiosteal flap from the medial femoral condyle in the year 2020 in Ganga hospital, Coimbatore. One patient reported with post-traumatic mobility of mandibular anterior segment, while the other patient had history trauma lead to avulsion of left maxillary alveolar segment. Draping of the defect with the periosteum and attached cancellous bone. The anastomoses was done to facial vessels.

Result

Radiological evidence of consolidation has been observed 3–5 months postoperatively. There was reduced mobility of mandibular anterior segment in our mandibular nonunion patient. With protected rehabilitation treatment starting 3–4 weeks postoperatively, both regained functional range of motion.

Conclusion

The medial femoral condyle corticoperiosteal flap proves to be versatile flap for reconstruction of small to medium bony defects in maxillofacial region. Raising the flap is uncomplicated and donor site morbidity is low. It should be the forthcoming customary flap in the maxillofacial area reconstruction of small bony defects in compromised surrounding tissue.

Keywords Medial femoral condyle flap, Small bony defects

Reconstruction of Oral Cancer Surgical Defects with Vascularised Flap

Dr. Swagato Chowdhury

Ruby General Hospital, Kolkata

Abstract

Reconstruction of surgical defects after oral cancer ablative surgery is one of the most interesting as well as challenging surgery. It enables us to restore the aesthetics and the different functional aspects like swallowing, speech etc. With the advent of Vascularised flap, we are now able to reconstruct more complex surgical defects in head and neck region. It has also given us more freedom in terms of oncological resectability. We always talk about reconstruction, but reconstruction as well as proper rehabilitation is the key for longterm survival and a meaningful life.

Infrahyoid Myocutaneous Flap: A Reconstruction Often Overlooked!

Dr. Divyachampa D. N. Khaunte

Abstract

The infrahyoid myocutaneous flap is the pedicled flap nourished by the superior thyroid vessels with venous drainage by superficial venous system and superior thyroid vein This flap is primarily used to reconstruct small and medium sized head and neck defects of approximately not exceeding 7 by 4 cm. It was first introduced in 1986 by Wang et al. The aim of this review is to highlight the clinical usefulness of the flap, primarily the clinical utility and limitations of the flap. The advantages of the flap lie with easy and quick preparation of the donor site, limiting surgical time preferably in high-risk cases, donor site closure with minimal cosmetic and clinical sequelae. The literature review gives success rate of 91%. With the available literature and our experience, can safely say that this flap is reliable, easy to harvest during neck dissection, safe, and carries negligible donor site morbidity. This flap can be an excellent choice of reconstruction in selected patients for Head Neck Reconstruction with relatively low surgical complexity.

Cranioplasty With Autogenous Frozen and Autoclaved Bone: Management and Treatment Outcomes

Dr. Ankur Thakral, Dr. N. K. Sahoo

Army Dental Corps

Abstract**Introduction**

Cranioplasty is a widely employed procedure for restoration of calvarial form and shape. The use of autogenous bone flap offers biological reconstruction with minimal donor site morbidity. One of the options to re-use bone autograft is low temperature preservation followed by autoclaving during cranioplasty.

Materials and Methods

A retrospective evaluation of 12 patients with a mean age of 32.58 ± 10.04 years who underwent frozen autogenous autoclaved bone cranioplasty was done. Cranial bone flaps were removed during the initial craniectomy and stored at 4°C for 20 min followed by preservation at -40°C . Cranioplasty subsequently was performed at a mean time period of 172.17 ± 26.20 days by thawing the bone at room temperature followed by autoclaving at 121°C under 15 psi for 40 min. Data regarding patients' characteristics and complications were recorded. Clinical outcomes based on skull shape and symmetry, cosmesis and scars were analysed by a panel of 4 raters, including 3 doctors and 1 patient. Radiological outcomes were analysed based on remaining bone thickness and bone gap widening.

Results

The present study revealed functionally, structurally, and cosmetically satisfying results. All the cases had satisfactory healing and no incidence of bone graft infection. The skull shape and symmetry, cosmesis and scars revealed excellent to moderate improvement in three fourth of the patients. Radiological outcomes revealed none of the patients had severe resorption requiring surgical revision with excellent to good implant alignment in 92% of cases.

Conclusion

The frozen autogenous cranial bone flaps sterilized by autoclaving is safe and effective material for cranioplasty.

Revisiting the Versatility of Buccal Myomucosal Flap in Reconstruction of Intra Oral Defects

Dr. Shruthi A. M.

Rangadore Memorial Hospital

Abstract

Introduction

The buccal myomucosal flap is an axial pattern flap containing buccinator muscle and buccal mucosa, based on buccal and/or facial arteries. Unlike other regional flaps and free flaps, this flap provides mucosal cover as opposed to skin cover. We present our experience with this flap and discuss its clinical applications.

Materials and Method

We reviewed our results using this flap between 2017 and 2021. Buccal myomucosal flap was used in 15 patients with various intraoral defects, which included oroantral fistula, post excision defects of alveolus, hard and soft palate, floor of mouth, lip, retromolar trigone, and tongue. No major complications were noted, except for wound dehiscence in 2 cases.

Conclusion

The buccal myomucosal flap is a reliable tool for functional reconstruction of small and medium-sized intraoral defects with a low risk of complications. Hence this flap should be in the armamentarium of every maxillofacial surgeon for oral cavity reconstruction.

A Change of Reconstructive Pattern of PMMC Flap in Oral Cancer Defects

Dr. Vinod Krishna K., Dr. Senthil Murugan M.

Saveetha Dental College and Hospital, Tamilnadu

Abstract

Introduction

Oral cancer is one of the most prevalent cancer seen in Indian population with an incidence of 20 per 10,000, among which many patients present with advanced T3 and T4 stage. As majority of these patients will undergo resections, neck dissections followed by reconstructions with pectoralis major myocutaneous flap (PMMC). In order to have cautious on pedicle, many centres do not divide the flap laterally which makes the reach inadequate and it looks bulky in the neck even after removal of sternocleidomastoid muscle.

Aims and Objective

To evaluate the reach of pectoralis major myocutaneous flap in oral cavity defect. Our objective is to assess the vitality of the flap and functional outcome where sternocleidomastoid were preserved and PMMC muscles were divided.

Materials and Methods

A total of 125 patients were operated between the year 2018–2020 at Saveetha Institute of Oral Cancer, from which clinical records of 50 patients who underwent PMMC reconstruction by muscle division were screened.

Results

All cases underwent PMMC reconstruction followed by resections in Buccal mucosa 31 (62%), mandibular Givobuccal Sulcus 10 (20%), Retromolar Trigone 9 (18%). Out of 50 patients, 11 (22%) underwent Hemimandibulectomy, 2 (4%) underwent bite resection, 5 (10%) underwent marginal mandibulectomy, 32 (64%) underwent segmental resection.

Discussions

Choice of reconstruction depends on factors such as site and size of the defect, functional and cosmetic implications of the defect, associated co-morbidity and availability of resources.

Summary and Conclusions

Harvest of the flap is technically easy, quick, and economical. It has good vascularity by preserving two pedicle, adequate bulk, and can cover extensive defects by our technique [Muscle Division]. No major postoperative complication was seen in any patients. 2 (4%) had partial flap necrosis while 5 (10%) had wound dehiscence, complete flap necrosis was not seen in any patients.

Functional Assessment of Swallowing After Mandibular Reconstruction of Odontogenic Tumors with Videofluoroscopy: A Cross Sectional Study

Dr. Reena Rachel Philips

Abstract

Background

Swallowing of food is the basic activity affected after resection of mandible which in turn affects the nutritional status of an individual. Mastication and swallowing are the two prominent phases in food digestion in which the role of mandible is paramount. Mandible is deemed necessary for the anatomical and functional integrity of swallowing. Resection of mandible can directly affect swallowing which can further lead to malnutrition. Reconstruction after resection should help to regain swallowing to near normal and its evaluation forms the integral part of functional assessment.

Aim

To assess the swallowing efficiency in patients with reconstructed mandibular defects with the help of Penetration Aspiration Scale on video fluoroscopic swallowing study (VFSS) [1, 2].

Results

Ten patients after reconstruction of the mandible were included in the study. The mandibular defects were classified according to Boyd et al. Bony defects ranged from 3 to 15 cms (mean = 9 cm). Mandibular defects were reconstructed with Free fibula flap, iliac block graft. VFSS was done at mean of 13 months postoperatively. Penetration Aspiration scale to determine the multidimensional depth of airway invasion and residue was used to assess the swallowing efficiency. Results were analysed on a scale of 1–8 with respect to penetration or aspiration to assess swallowing efficacy.

Conclusion

Reconstructed lateral and central mandibular defects have less aspiration and better swallowing efficiency.

References

- Robbins J, Coyle J, Rosenbek J, Roecker E, Wood J. Differentiation of Normal and Abnormal Airway Protection during Swallowing Using the Penetration–Aspiration Scale. *Dysphagia*. 1999 Aug;14(4):228–32.
- Gonzalez SR, Hobbs B, Vural E, Moreno MA. Functional outcome predictors following mandibular reconstruction with osteocutaneous fibula free flaps: correlating early postoperative videofluoroscopic swallow studies with long-term clinical results. *Maxillofac Plast Reconstr Surg*. 2019 Dec;41(1):30.

One Stage Functional Jaw Reconstruction in Patients with Benign and Malignant Pathologies: A 5–8 year Follow-Up Study

Dr. Vinay V. Kumar

Oral Rehabilitation Center

Abstract

One stage functional jaw reconstruction is defined as the resection and reconstruction of segmental defects along with osseointegrating dental implants loaded onto a provisional restoration, in the ideal prosthetic rehabilitative position during one single surgical procedure. It has also been commonly referred to as Jaw in a Day.

Aim

The primary aim of the study is to describe clinical outcomes of patients who underwent one stage functional jaw reconstruction according to prior published criteria (Kumar et al. 2016). The secondary aim of the study is to describe planning and execution of one-stage functional jaw reconstruction; to evaluate success rates of the reconstruction and prosthetic restoration achieved in these patients.

Patients and Methods

Patients who underwent one-stage functional jaw reconstruction planned by the principal investigator, from Jan 2013 to March 2016 were recalled in 2019 and 2021. Planning and execution for the reconstruction utilised either analog or digital techniques. Outcome parameters recorded were: time taken for prosthetic rehabilitation, implant success criteria, peri-implant tissue evaluation (Kumar et al. 2016), and functional outcomes (Kumar 2018).

Results

A total of 18 patients underwent one-stage jaw reconstruction with a total of 58 implants. Five patients with maxilla reconstruction and 13 mandibular reconstruction. 9 patients underwent postop radiotherapy. In 12 patients digital planning was used and 6 with conventional planning. Two patients had partial flap necrosis, two patients had plate fracture and in one patient disease recurred at one year. Functional prosthesis was provided in 14 out of the 18 patients.

Conclusion

One-stage functional jaw reconstruction is a predictable method for providing rehabilitative outcomes with successful outcomes at 5–7 years.

Effect of Timing of Cranioplasty (Early vs. Late) on Neurological Functional Outcome and Complication Rates

Dr. Kapil Tomar

AFMC, Pune

Abstract

Background

Cranioplasty performed after a decompressive craniectomy (DC) for traumatic brain injury (TBI), stroke or aneurysmal bleed has a role of restoring cerebral protection and craniofacial cosmesis as well as improving neuromotor function. There has been no consensus with regards to ideal timing of cranioplasty after DC.

Aim and Objectives

The aim of this study was to evaluate the effect of timing of cranioplasty on improvement of neuromotor function and the objective being to compare the complication rates between early and late cranioplasty groups.

Methods

A retrospective cohort study was carried out at a tertiary care hospital on patients undergone early (less than or equal to 12 weeks) and late (greater than 12 weeks) cranioplasty using autologous cranial bone after DC. The functional independence measure (FIM) and the cognitive assessment report (COGNISTAT) tools were used to compare neuromotor and cognitive function outcome between the two groups. Appropriate statistical tools were used to compare complication rates between early and late cranioplasty.

Results

31 adult patients of cranioplasty (21 male and 10 female) were evaluated. 14 undergone early and 17 late cranioplasty. Comparison for neuromotor and cognitive function using FIM and COGNISTAT tools revealed statistically significant advantage in the early cranioplasty group. Overall complication rates between the two groups varied but were statistically insignificant.

Conclusion

Performing an early cranioplasty provides advantages of improvement of neuromotor and cognitive function through early restoration of cerebrospinal fluid (CSF) and intra cerebral hemo-dynamics. It further avoids the potential problems of developing the 'syndrome of trephined' and resorption of the autologous bone.

Temporalis Myofascial Flap for Primary Reconstruction of Post-Surgical Defects Associated with Mucormycosis of Craniofacial Region: Our Experience

Dr. Divya Ratnakar Kamath, Prof. Dr. Venkadasalpathi N.

Hannah Joseph Institute of Neurosciences, Madurai, Tamil Nadu

Abstract

Background

Mucormycosis is an extremely fatal and debilitating infection. Prompt diagnosis and treatment is very essential to decrease the morbidity and mortality associated with mucormycosis. Here in we present 26 cases of mucormycosis of craniofacial region treated with radical resection and debridement followed by primary reconstruction with temporalis myofascial flap at our center between 1st June, 2021 to 31st August, 2021.

Aims and Objectives

1. To evaluate postoperative healing after primary reconstruction of post-surgical defects associated with mucormycosis of craniofacial region.
2. Recurrence rate after primary reconstruction of post-surgical defects associated with mucormycosis of craniofacial region.

Methods

Case series of 26 patients of mucormycosis operated at our center between 1st June, 2021 to 31st August, 2021.

Findings

Out of the 26 operated cases 23 cases had satisfactory healing with no radiographic evidence of recurrence and 3 cases had recurrence confirmed radiologically after a mean follow-up period of 2 months. Out of the 3 cases of recurrence, 1 patient was treated conservatively with medical management using anti-fungal agents and 2 patients were treated with medical management combined with surgical and endoscopic debridement.

Conclusion

Primary reconstruction of post-surgical defects associated with mucormycosis of craniofacial region with Temporalis myofascial flap should be considered as a primary treatment modality. Excellent

vascularity, flap uptake, resilience of flap, better quality of life postoperatively and decrease in morbidity and mortality favours the use of this flap as a primary reconstruction modality. Being a vascularized flap, it has the advantage of better tissue penetration of anti-fungal agents. Better psychological acceptance by patients, earlier return to functions i.e. speech and swallowing and decrease in the rate of infection and recurrence are the prime advantages of this flap.

Role of Coronoideotomy in the Survival of Reconstruction Plate used in the Management of Mandibular Continuity Defects: A Randomised Controlled Clinical Study

Prof. Dr. Naresh Kumar Sharma, Dr. Akhilesh Kumar Singh

Faculty of Dental Sciences, IMS, BHU

Abstract

The aim of this prospective study was to evaluate and compare the survival rate of reconstruction plate used in the management of mandibular continuity defects in patients with and without coronoideotomy.

Patients and Methods

Fifty-four patients were included in the study who were divided randomly into two groups (27 patients each). The patients underwent segmental mandibulectomy followed by mandibular reconstruction with reconstruction plate, in addition, ipsilateral coronoideotomy was done in group B patients. The patients were assessed at four intervals such as immediate post-operative day (Post-op day 1), 3 months, 6 months and 12 months after surgery, for parameters like maximum inter-incisal mouth opening (MIMO) and reconstruction plate related complications (RPRC).

Results

The results revealed that that the MIMO measurement at any time period was higher in the patients who underwent coronoideotomy. It was also observed that the incidence of RPRC was higher in patients who did not undergo coronoideotomy. It was observed that the overall plate fracture was more in Group A (51.85%) than in Group B (22.22%), with a statistically significant difference. It was also observed that the incidence of plate fracture is comparatively higher in male patients with malignant lesion in Group A.

Conclusion

Since it is evident from the present study that ipsilateral coronoideotomy delays plate related complications and the procedure is not associated with any complications, it can be recommended in every case of mandibular reconstruction with reconstruction plate.

Prebent Plate in Reconstruction of Mandibular Defect Following Resection of Acanthomatous Ameloblastoma

Dr. Effie Edsors

Sree Mookambika Institute of Dental Sciences, Kanyakumari

Abstract

Introduction

Adaptation of a reconstruction plate to a segmentally resected mandible is usually performed in the operation table. Intraoperative plate bending requires extensive surgical exposure and increase surgical time. The recent advance of rapid prototype technology has led

to the production of prototype models from computerized imaging. Benign or malignant tumors of the jaws are conditions that commonly result in significant continuity defects in the mandible. Ameloblastoma is the most common benign odontogenic epithelial tumor which is slow growing and locally aggressive in nature and mostly reported in the posterior region of mandible. Various histopathological variants of ameloblastoma exist, among which acanthomatous type of ameloblastoma is one of the rarest types. Acanthomatous ameloblastoma is usually reported in elderly human population and most commonly reported in canine mandible in literature.

Aims and Objectives

To analyze the advantages of using prebent plate in reconstruction of mandibular defect.

Material and Methods

Large long standing multicystic acanthomatous ameloblastoma of the anterior mandible crossing midline and its surgical management with resection using surgical guide resulting in a large mandibular defect followed by reconstruction with prebent plate in customized three dimensional stereolithography model by using rapid prototyping technology.

Results

Prebent plates significantly decreases surgical time, offers improved adaptation of surgical reconstruction plate, decreases bone plate gap and thus scar formation. It also decreases fatigue of the metal by significantly reducing the trial and error factor.

Discussion

By means of rapid prototype technology, accurate three dimensional models can be obtained. Using these models, it is possible to design, obtain, and adapt custom hardware for individual surgical cases.

Obliteration of Maxillofacial Defects Using Buccal Fat-Pad, Platelet Rich-Fibrin: A Randomised Control Trial

Dr. Neeraj Bansal

Maulana Azad Institute of Dental Sciences

Abstract

Purpose

This randomized control trial was aimed at comparing the efficiency of Buccal fat-pad (BFP) and platelet rich-fibrin (PRF) with control group of spontaneous regeneration for achieving bone regenerate after enucleation/ablation of pathologic lesions.

Methods

36 patients were included and were randomly selected as Test or Control group consisting of 12 patients in each group: Group 1 consisted of obliteration of defect using BFP; Group 2 consisted of obliteration of the defect using PRF and Group 3 included spontaneous regeneration of the defect. Patients were examined clinically and radiographically. Postoperative radiographs were taken at 3 and 6 months to evaluate the reduction in size of the residual cavity and the change in bone density compared using CBCT.

Results

Males (66.7%; n = 24/36) in the third to fourth decade were commonly affected involving mandibular posterior region (73.3%). For Group 1, the mean change in volume of the defect was noted to be $32.24 \pm 17.9 \text{ mm}^3$ to $7.28 \pm 8.30 \text{ mm}^3$ ($p = 0.022^*$) from the pre-operative period to the last follow-up. Similarly, for Group 2, the defect size changed from $37.13 \pm 19.2 \text{ mm}^3$ to $5.42 \pm 3.15 \text{ mm}^3$ ($p = 0.007^*$). Mean changes in volume of the defect in group 3 were noted to be $29.18 \pm 30.19 \text{ mm}^3$ to $1.41 \pm 1.45 \text{ mm}^3$ ($p = 0.074$) to the last follow up.

Conclusions

Spontaneous regeneration remains an effective and reliable method for the repair of small defects. However, larger defects may end up with dehiscence and delayed healing. Thus, larger defects can be successfully treated with PRF/BFP without any post-operative complications and a good bone fill.

Buccal Pad of Fat: An Asset for Oral-Maxillofacial Region

Dr. Keerat Preet Kour

Faculty of Dental Sciences, SGT University

Abstract

The buccal fat pad flap (BFP) is considered to be an undemanding, simple yet dependable flap for the treatment of defects of oral cavity owing to its rich blood supply and location, which is proximal to the location of various intraoral defects. In this paper, we present diverse cases of reconstruction with BFP and surgical technique. We believe that the BFP has shown a high success rate in various clinical applications, including the closure of carcinomas, oroantral oral submucous fibrosis as well as have a simple surgical procedure. However, the control of etiologic factors, size of defect, anatomical location of defect, general condition of patient and compliance could influence the prognosis after grafting.

Keywords Reconstruction surgery, Oral cavity, Reconstruction techniques, Maxillofacial defects, Maxillofacial reconstruction

Blood Glucose as a Sensitive and Specific Indicator for Free Flap Monitoring in Head and Neck Reconstruction

Dr. R. Ritvik Vinayak

Vydehi Institute of Dental Sciences and Research Centre

Abstract

In microsurgical reconstruction, vascular obstruction occurs in approximately 20% of patients. Close monitoring is central to their care. Clinical/Doppler detection of vascular obstruction could be enhanced by blood glucose measurement. The aim of the study was to evaluate blood glucose measurement (BGM) for flap monitoring and to establish a simple method that can be used widely to decrease the flap loss rate after tissue transplantation. Postoperatively blood glucose measurement were performed on 200 head and neck free flap transfers. The flaps were 78 free fibula osteocutaneous flap, 82 radial forearm free flap, 24 anterolateral thigh flap and 16 lateral arm flap. Skin punctures and blood glucose measurements were made using a Accu-Chek needle which are commonly used by diabetic patients. Partial necrosis of the vascular territory was found at 2 points (9%), and obstruction due to a venous thrombus was found at 2 points (9%). The mean blood glucose level in the congestive flaps was significantly lower than that in healthy flaps. A cutoff value for BGM of 62 mg/dL, at which the sensitivity and specificity were 88% and 82%. Blood glucose measurement is an easy and accessible adjunct to flap monitoring, and the combination of BGM and previously established methods is likely to reduce postoperative complications caused by the development of a venous thrombus after free tissue transplantation.

Role of Custom Fabricated TMJ Prosthesis for Joint Replacement Following Resection of Ameloblastomas

Dr. Sneha Krishnan

Saveetha Dental College, Chennai

Abstract

Ameloblastoma is an aggressive benign odontogenic tumor more commonly found in the mandible (80%) than in the maxilla (20%) and representing about 1–3% of all tumors and cysts of the maxillo-mandibular area and 11% of all odontogenic tumors. The choice of treatment thus depends on the histologic subtype. Radical therapy is the recommended modality for solid ameloblastomas. The possibilities of recurrence even after en bloc resection are still high. When resection is indicated, reconstructive measures must be considered. The aim of this case report is to study a case of a recurrent ameloblastoma that was treated by hemimandibulectomy and reconstructed with a novel technique consisting of a patient specific TMJ prosthesis. The role and outcomes of custom-made temporomandibular joint prostheses in these circumstances are discussed. TMJ prosthesis system thus represents a reliable alternative with great utility for the reconstruction of patients affected by large ameloblastomas, showing outstanding results in terms of providing adequate form, function, and quality of life. Although adequate form has been confirmed radiographically, function was evaluated clinically by the lack of pain, an adequate mouth opening, and the absence of joint dysfunction over a period of 1 year.

Post Ankylosis Customised TMJ Replacement: A Study

Dr. M Haaris Khan

King George Medical University

Abstract

Patient specific implant (PSI) has proved itself as changing the perspective of treating and managing craniomaxillofacial trauma. The shattered bones/defects can be reconstructed without taking any donor material like bone/cartilage from the body itself, risking resorption postoperatively. It is a new treatment methodology which helps achieve excellent post operative results especially when esthetics are concerned. It requires designing of the patient specific implant, its milling or fabrication using Titanium or its alloys and then the surgical procedure to fit the implant in the desired location. In this poster, we have discussed about the PSI, its merits and demerits, method of fabrication and 2 cases where it was used in our department, in one case for the reconstruction of orbital floor fracture and in another case for reconstruction of skull vault defect which was caused post trauma.

S. No. 46**Involvement of Commissure in Oral Cancer Surgery**

Dr. Arya V. M.

Amrita School of Dentistry

Abstract**Introduction**

A large proportion of oral cancer cases involve the lip subsite. Cancer surgeries which require access to posterior maxilla or mandible may necessitate splitting of the lip or a commissure split, possibly leading to similar unfavorable results. Poor esthetic appearance combined with contractures and incompetence of the lips and salivary drooling often cause profound negative impact on the personal and psychosocial well-being of the individual.

Aim

To assess the outcomes of cases where commissure was involved in oral cancer surgery.

Method

Two patients who underwent surgery for oral cancer were observed. The commissure was part of resection specimen in one case and the other one was a lateral lip split access surgery. These patients were assessed and their esthetic and functional outcomes were evaluated.

Result

With our study we found that the esthetic and functional outcomes in such patients were satisfactory and fared well after a minimum follow up period of six months in terms of speaking, swallowing, drooling, chewing, and physical appearance.

Discussion

The less favored option for total lip reconstruction is free tissue transfer. Whenever possible, local tissue must be used to reconstruct the lips. Reconstruction of large defects of the lip using local flaps can lead to microstomia. The trismus evolved at different rates in both the cases.

Summary and Conclusion

The esthetic and functional outcomes in patients with oral cancer who underwent treatment with oral commissure involvement are satisfactory.

Surgical Modalities for Reconstruction of Lower Lip Defect

Dr. Sonam Khokhar

Subharti Dental College and Hospital

Abstract

Lip reconstruction poses a particular challenge to the surgeons in that the lips are the dynamic center of the lower third of the face. Their role in aesthetic balance, facial expression, speech and deglutition is not replicated by any other tissue substitute. Lip defects usually occur after ablative surgery, trauma, human and animal bite. Any reconstruction of the lips must include both functional and aesthetic considerations. The aesthetic goals of lip reconstruction are to provide adequate replacement of external skin while maintaining the aesthetic balance of the vermilioncutaneous junction and lip aesthetic units. The functional goals of lip reconstruction are to maintain intraoral mucosal lining and to preserve the surface area of the oral aperture. Lip reconstruction is carried out based on the size and location of the defect. Commissure's defect is usually reconstructed using Estlander flap, Abbe flap or a combination of both. Wedge shape defects or defects less than 1/3 are usually treated with direct suturing. Defects ranging from 1/3 to 2/3 are reconstructed using various local flaps such as fan flap, Karapandzic flap, Bernard flap, step ladder technique and many more. Lip defects of more than 2/3 are usually reconstructed using distant flaps as radial forearm flaps. This paper discusses the reconstruction of lip defects of different location and etiology using various flap techniques.

Use of Free Flaps for Oral Cavity Reconstruction

Dr. Shreya Das

D.Y. Patil University

Abstract

The treatment of oral cancer is complex in terms of resection and reconstruction. Primary surgical resection of carcinoma of oral cavity is the standard of care for both early as well as advanced lesions. Reconstruction of the defect thus created is of paramount importance so as to achieve reliable wound closure to protect vital structures and also to achieve better functional and esthetic results. Many factors are considered in order to reconstruct the surgical defect, including the patient factor, type of tumor and the defect created after primary tumor excision. There are various reconstructive modalities for treatment of oral cancer like local flap, pediculate flap and free flap. In the past 2–3 decades, there has been an increased use of free flaps. This is because of the low complication rates and improved functional and aesthetic results seen with free-flap reconstruction. Free flap reconstruction of oral cavity defects is a multidisciplinary treatment strategy which is necessary for maximizing disease control and to preserve the natural form and function of the oral cavity.

S. No. 47**Fibula and Implants in Mandibular Rehabilitation**

Dr. Benjamin George Mathew

Krishnadevaraya College of Dental Sciences and Hospital

Abstract

The possibility of placing dental implants in reconstructed regions allows us to overcome the challenges of a removable prosthesis. Dental implants in free fibular grafts offers us room to explore the possibilities related to complete rehabilitation of a patient following resection due to pathologies or trauma. This paper aims to highlight this aspect of reconstructive surgery.

S. No. 48**Immediate Reconstruction of TMJ and Mandible After Hemimandibulectomy For Ameloblastoma Using Alloplastic Prosthesis**

Dr. Maneesha Sree G. R.

RV Dental College

Abstract

Reconstruction of the mandible has shown much advancement in the past several decades. However there are always limitations which bind and confuse the clinicians from providing the best treatment plan. Microvascular free flap transfer currently represents one of the most popular methods for mandibular reconstruction in India. The procedure is time consuming and combined with immediate reconstruction, requires two surgical teams working simultaneously which further increases the total cost of treatment.

Introduction

A load bearing prosthesis which can simulate the TMJ movements and give an esthetic outcome in terms of no deviation of jaws on opening and lateral movements and allowing for full range of facial expressions is ideal for such extensive reconstructions. The reconstruction system should ensure restoration of mechanical function, and morphological and esthetic features. According to Hamaker, Martin was the first to reform the mandibular arch with an external prosthetic appliance, in 1889. Here, we talk about a novel mandibular replacement technique with a TMJ prosthesis and Titanium mandibular body for a case of Hemimandibulectomy due to Aggressive Ameloblastoma of the Right mandible. With this presentation, I'd like to highlight the benefits of using such alloplastic techniques over microvascular free flap reconstruction observed during the course of treatment planning, surgical time and a review period of 6 months post-operatively.

Conclusion

TMJ Concepts prosthesis system (TMJ Concepts) represents a reliable alternative with great utility for the reconstruction of patients affected by large ameloblastomas, showing outstanding results in terms of providing adequate form, function, and quality of life. Although adequate form has been confirmed radiographically, function was evaluated clinically by the lack of pain, an adequate mouth opening, and the absence of joint dysfunction.

Reference

1. Ruiz Valero et al. TMJ Concepts Prosthesis and Ameloblastoma. J Oral Maxillofac Surg 2014.

S. No. 49**Complications in Microvascular Surgery**

Dr. Sowmiya S.

Dayanada Sagar College of Dental Sciences

Abstract

Free flaps are widely used in maxillofacial surgery for reconstructing various soft and hard tissue defects. However, it has a few drawbacks, such as long operation time and failure rate, and various complications. Yet, the microvascular surgery stands as an inevitable option for the present-day reconstruction. Various factors act as obstacles to jeopardise the success rate of free flap such as advanced age, prolonged operating time, intra operative fluid defect, radiotherapy, other comorbidities, smoking. With the introduction of improved microvascular instruments, sutures, and microscopes, and a refinement of microvascular techniques, the current success rate has improved than before. The major complications such as thrombosis, total or partial free flap necrosis, fistula formation, post operative bleeding, seroma formation, infection and so on. The purpose of this paper is to collectively discuss about the complications that occur in the intra/post operative period of microvascular surgery.

S. No. 50**Mandibular Reconstruction with Microvascular Free Fibula Flap**

Dr. Priya Raju Bhujje

Gdc Aurangabad

Abstract**Background**

Mandible forms the profile and contour of the lower third of the face and is vital for crucial functions like speech, chewing, swallowing, oral competence as well as the facial appearance. In maxillofacial surgery various pathologies and tumor ablation often causes continuity defect of mandible which results anatomical and functional morbidity of the patient. The reconstruction of the mandibular defect is complex and challenging but mandatory to restore the oral function and speech. Reconstruction with skin and soft tissue flaps alone results in considerable deviation of the jaw, difficulties in mastication and speech and a less than ideal result. In 1989, Hidalgo reported the use of free vascularized fibula flaps for mandibular reconstruction. The presence of both endosteal and periosteal blood supplies to the bone allows for multiple osteotomies and thereby precise contouring to obtain the shape of the native mandible. So, the fibula has been increasingly chosen as the donor site for mandibular reconstruction. The purpose of the present case report is to establish microvascular free fibula as a better option in immediate reconstruction of mandibular continuity defect.

Objective

Anatomical, functional and esthetic rehabilitation of patients after mandibular resection.

Method

Revascularization of the patients free fibula graft by microvascular anastomosis of paroneal artery with facial artery at the segmental defect site of mandible.

Results

Remarkable contour, cosmesis and early functional rehabilitation of the patient; improving the quality of life in reconstructed patients.

Conclusion

Microvascular reconstruction with fibula is the better option for postmandibulectomy defects due to its reliability, versatility and its ability to be contoured to the mandibular shape.

Keywords Mandible, Defect, Reconstruction, Microvascular technique, Fibula graft

Upper Lip and Nose Reconstruction Using Local Flaps

Dr. Dhrumil Sarkar

Vyas Dental Collage and Hospital

Abstract

Angiosarcomas are malignant vascular neoplasia's with rapid growth that develop from endothelial cells. They represent 2% of all sarcomas and only 1–4% are located in the aerodigestive tract. Since 1977, only 16 cases have been reported. We present 72-year-old male patient, with a cutaneous over growth on the nose which was smooth in consistency, purplish discoloration and measured about 4 * 4 * 4 in size. CT scan showed a nonenhanced tumor on the nose. Biopsy and immunohistochemistry were performed which revealed a low-grade angiosarcoma. Surgical excision was performed with immediate reconstruction of the nose and the upper lip with bilateral nasolabial flap and para median forehead flap. Aerodigestive angiosarcomas have a better prognosis than angiosarcomas of other locations due to better cell differentiation and the presence of early symptoms.

S. No. 51
**The Versatility of Nasolabial Flaps in Orofacial Reconstruction:
 A 5-Year Retrospective Study**

Dr. Sangeetha S. M.

College of Dental Sciences and Hospital, Davangere

Abstract

Background

Oral premalignant conditions and oral cancer account for about 30–35% population of India having tobacco consumption habits. Patients undergoing surgical excision of such conditions and tumours requires reconstruction for surgical site repair. The use of nasolabial flap to reconstruct such defect is one of the oldest methods in the medical literature of reconstruction.

Objectives

To evaluate the viability and success of nasolabial flap in reconstruction of various post surgical oral cavity defects.

Materials and Methods

A total of 15 patients were selected who reported to the Department of Oral and Maxillofacial Surgery, College of Dental Sciences and Hospital, Davangere with premalignant conditions and oral cancers who were treated for the same and the defects were reconstructed with nasolabial flap. Data was collected retrospectively from the patients' records from 2016 to 2021. The data was evaluated based on clinical parameters and analysed by Pearson Chi-Square and Fisher's exact test.

Results

The nasolabial flap proved to be a very good choice for the orofacial defects in terms of cosmesis, reconstruction as well as rehabilitation.

References

1. Balaji SM. Versatility of nasolabial flaps for the management of severe trismus in oral submucous fibrosis. *Indian J Dent Res.* 2016 Sep-Oct;27(5):492–497. <https://doi.org/10.4103/0970-9290.195627> PMID: 27966506.
2. Shetty SK, Sarkar S. The Versatility of Nasolabial Flaps in Maxillofacial Surgery. *J Maxillofac Oral Surg.* 2019 Dec;18(4):589–595. <https://doi.org/10.1007/s12663-018-1162-8> Epub 2018 Oct 8. PMID: 31624442; PMCID: PMC6795653.

Category: Dentoalveolar Surgery/Nerve Injuries

Effect of Oxygen Gel on Soft Tissue Healing After Minor Oral Surgical Procedures

Dr. Kumari Chetna

Sudha Rastagi College of Dental Sciences and Research

Abstract

Soft tissue healing is one of the most important factors which has major impact after any minor oral surgery. Wound healing monitoring after surgery is an important concern in dentistry. It is important for oral and maxillofacial surgeons to be familiar with all the possible complications of wound healing after minor oral surgical procedures. There are many factors which affect soft tissue healing during minor

oral surgical procedures. Therefore, to overcome these situations oral surgeons should be aware of various treatment modalities like piezoelectric, ozone therapy for healthy soft tissue healing. Nowadays ozone has been used to minimise the postoperative complication after minor oral surgical procedures. It enhances wound healing by increasing oxygen supply in ischaemic zones. Oxygen gel (Blue m oral) is being an alternative change as an enhanced approach to wound healing in recent years. Oxygen gel (Blue m oral) is also used in soft tissue lesions like aphthous stomatitis, burning mouth syndrome and fungal infections like candida albicans. It is used in infections like herpes labialis, lichen planus, oral mucositis, pemphigus vulgaris, pericoronitis etc. We conducted a study on twenty patients in which results were very well after tooth removal, biopsy, alveoloplasty etc. and after miscellaneous.

S. No. 1

An Epidemic Within a Pandemic, Our Institutional Experience

Dr. Pragati

Bangalore Institute of Dental Sciences and Hospital, Bangalore

Abstract

Coronavirus disease (COVID-19) remains a health concern with new challenges emerging as the pandemic progresses. The recent rise of opportunistic infections especially mucormycosis in COVID-19 patients is further complicating their outcomes. Mucormycosis is well known to infect patients with diabetes mellitus, malignancy, chemotherapy, and other immunocompromised conditions. The treatment of COVID-19 largely remains systemic steroids and other immunomodulators that add to the risk of invasive fungal infection. The study was conducted on 55 patients diagnosed with mucormycosis. They reported to the department of oral and maxillofacial surgery, BMJH from May 2021 to August 2021 with a history of covid-19 infection. All the patients underwent head and neck MRI or CT with contrast. Based on the radiographic findings, these patients were categorized into 6 groups and management was carried out according to the AIIMS protocol. All the patients were followed-up and regular surveillance scans, 2 and 3 months postoperatively was done. Here, we present our experience of 55 patients who were diagnosed with mucormycosis. In this paper we highlight on the clinical presentation unique to individual cases, their demographics and the systematic management protocol that was followed. High survival rate (96.4%) was seen due to multidisciplinary and aggressive systematic management.

S. No. 2

Styloidectomy: A Simple Intra Oral Technique for Eagle's Syndrome

Dr. Sameena A. Shaikh

Al Ameen Dental College

Abstract

Stylohyoid syndrome or eagle's syndrome is caused by calcification of the stylohyoid ligament or elongation of the bony styloid process. It may remain asymptomatic or it may present with facial neuralgia, foreign body sensation in pharynx, throat pain or even otalgia and

cephalgia. Diagnosis is mainly based on clinical examination and confirmed by the radiological findings. The mainstay treatment is surgical excision via external approach or intraoral approach. We are reporting a case of 30-year-old female with unilateral stylohyoid syndrome. Intraoral styloidectomy was performed, following which she was completely relieved of her symptoms. It has several advantages including minimally invasive, scarless, cost-effective technique with good patient compliance.

Access Osteotomies: The Door to Depths

Dr. Babin C. B.

Govt. Dental College, Calicut

Abstract

Access osteotomy through facial skeleton have been the throughway for the plethora of pathologies of base of skull and deep space of neck. The choice and type of access osteotomy to these hidden lesions of cranial base and deep spaces is most often based on the anatomic extend of the lesion, vascularity and involvement of neurovascular structures in and around it. Here highlighting the result of mandibulotomy approach to depths of head and neck over other approaches for face and neck pathologies.

S. No. 3

Unravelling the Clinical Outcomes and QOL After Maxillary Labial Frenectomy: An Observational Study

Dr. Kiran Vincent

MES Dental College Perinthalmanna

Abstract

As today's focus is more on to restoring the better quality of life (QOL) of patients after any surgical procedure, this study looks on to the same where the aberrant maxillary labial frenal attachments are managed with laser and scalpel. As per literature laser surgical technique offer less post-operative bleeding, pain and discomfort than classical surgical technique with scalpel. The aim is to evaluate the parameters such as postoperative pain, progress in wound healing, estimation of postoperative discomfort and post-operative QOL of the patient. This prospective longitudinal observational study comprised of 2 study groups with a total number of thirty six patients who underwent frenectomy using conventional scalpel (Group A) and diode laser—assisted (980 nm) (Group B) technique. Parameters were then assessed postoperatively on the 1st, 7th and 14th day. Categorical variable was assessed using chi square test and the Quantitative variable was assessed with independent *t* test. $P < 0.05$ was considered statistically significant. The data analysed and presented as mean percentage and standard deviation. Significant reduction in pain and ooze and improvement in QOL were noticed in group B. Over-all quality of life of the patient is very much dependable on the mode of surgical technique. Thus, diode laser is reliable and found to be the first choice in terms of clinical outcomes and better patient post-operative quality of life.

S. No. 4

Potato Peel and Platelet Rich Fibrin as an Adjunct in Treating Cervicofacial Necrotizing Fasciitis

Dr. S. Sahana

Sri Hasanamba Dental College and Hospital

Abstract

Necrotizing fasciitis of the head and neck region is an uncommon, rapidly progressive subcutaneous infection. It is usually associated with odontogenic infections, trauma, and in patients with a history of recent surgery. There is higher prevalence in patients with diabetes. Necrosis of the skin in the affected area is often noted. Three cases of necrotizing fasciitis of the head and neck region which was odontogenic in origin, were treated with platelet rich fibrin and potato peel as an adjunct to surgical treatment with debridement, and drainage in combination with broad spectrum antibiotics. Three male patients diagnosed with cervicofacial necrotizing fasciitis, of age group 60–85 years, in which two patients were diabetic, were treated with platelet rich fibrin and potato peel dressing as adjunct to the intravascular broad spectrum antibiotics and surgical debridement with metronidazole and hydrogen peroxide. This was followed by daily change of dressing, which comprised of boiled potato peel and framycetin ointment and gauze, for 7 days. The acquired results were satisfactory. The wound healing improved remarkably everyday. Marginal epithelialisation and healthy granulation tissue formation was noted. The size of the defect decreased significantly, which eliminated the need for skin graft. Potato peel and platelet rich fibrin are effective, accessible and cost efficient adjunct in treating necrotizing fasciitis as compared to that of hyperbaric oxygen therapy, alginate and hydrogel dressing and vacuum assisted dressing.

Management of Necrotising Fasciitis in Head and Neck Region: A Case Series

Dr. Mugdha Francis

Manipal Collage of Dental Sciences, Manipal

Abstract

Background

An unusual medical infection known as necrotizing fasciitis may occur in a patient with dental infection when aseptic condition is not maintained. It is rarely seen in head and neck region and mostly tends to affect the inguinoscrotal region, perineum, abdomen and extremities. This series presents a cases of necrotizing fasciitis in diabetic patient post tooth infection. Timely diagnosis and treatment play a crucial role in the prognosis of this infection.

Objective

This case series describes the precise treatment of necrotising fasciitis for both relieving the airway obstruction and preventing disturbance of deglutition.

Materials and Method

This is a case series of 2 unique cases of necrotising fasciitis who reported to the Department of Oral and Maxillofacial Surgery, Manipal College of Dental Sciences, Manipal. The patient successfully underwent incision and drainage under general anaesthesia. The surgical outcome on post-operative follow-up have been discussed and compared against available literature.

Conclusion

Necrotizing fasciitis is a rare infection often goes misdiagnosed. Early recognition and correct treatment increases the prognosis of infection.

References

1. Cervical Necrotizing fasciitis Caused by Dental Extraction, Case reports in Dentistry, 2016.
2. Necrotizing fasciitis of the head and neck: a case report, Korean Association Oral Maxillofacial Surgery, April 2015.

S. No. 5**Immediate and Delayed Post Traumatic Rhinoplasty: A Study of Two Cases**

Dr. Anju I. S.

Azeezia College of Dental Science and Research

Abstract

Rhinoplasty is considered to be one of the most challenging procedures in head and neck surgery. Meticulous planning and excellent surgical skills are pre-requisites for reproducible good outcomes. The procedure has significantly changed over the years since the first aesthetic procedure described by John Roe in 1887. Descriptive anatomical studies as well as innovative techniques have encouraged new understandings with regards to middle vault reconstruction, tip surgery, and alar base modification. The advent of the extended open approach and piezoelectric surgery has opened the door to new osteotomy patterns under direct visualization. Rhinoplasty changed considerably in the last decades from a standardised reduction procedure to a highly differentiated problem oriented procedure with reductions, relocation and augmentation of tissues which are being frequently combined. This paper presents two cases of post traumatic nasal deformity treated immediately and delayed with rhinoplasty.

S. No. 6**Osteoma of Mandibular Condyle: A Case Report**

Dr. Dr. Vijay Kumar

Chandra Dental College and Hospital, Lucknow

Abstract

Osteoma of mandibular condyle is a rare finding. It is composed of both cortical and cancellous bone. It has unknown etiology. It is thought that it may originate from either cartilage or embryonic periosteum. It may be symptomatic or asymptomatic with limitation of mouth opening, deviation of mandible towards unaffected side, cross bite, facial asymmetry, deviation of the jaw. We present a case of osteoma of 22 years old boy in left side of condyle. The aim of this paper presentation is to report an unusual case of osteoma in the mandibular condylar neck.

S. No. 7**Choice of Oral and Maxillofacial Surgery as a Specialization and Career Path: An Undergraduate Perspective**

Dr. Dimple Jain, Dr. Chitra Chakravarthy

Navodaya Dental College

Abstract

Undergraduates pursuing dentistry choose from nine specialties to further their education and career path. Oral Surgery is the specialty which forms a bridge between medicine and dentistry. Do they get an adequate insight into this subject to make an informed decision on pursuing this field? What inspires them to choose this path? The aim is to analyze the attitude and reasons for students pursuing Bachelor's degree in dentistry towards choosing OMFS as a post-graduation specialization. An online questionnaire was circulated among final - year dental students, interns and general dental practitioners from all over India. It consisted of 3 sections which emphasized on their interest towards pursuing post-graduation, their attitude towards OMFS as a specialty and a career option. A total of 1145 responses were obtained through the survey, it was observed that majority (86%) of participants were interested in attaining a Master's degree in dentistry and 56% of the participants selected Oral and Maxillofacial Surgery as their first choice in pursuing post-graduation. It was also noted that out of 87% of total female participants in the study 54% of them were interested in pursuing OMFS. Previous studies have shown that students voluntarily choose OMFS as a specialization. In our study, majority (56.8%) of the participants chose OMFS, followed by endodontics (9.2%). The major reasons to pursue OMFS being deep interest towards this subject, financial benefit and to gain knowledge and clinical experience.

S. No. 8**Multi disciplinary Approach: A Boon or a Curse?**

Dr. Kripa Gupta

DY Patil Dental College and Hospital

Abstract

Several complicated cases of oral and maxillofacial surgery require the expertise of more than just our field. However, a joint management, although necessary, sometimes spells trouble for the patient. The more complex the procedure, the more potential for complications. This paper discusses one such case in which a multidisciplinary approach seemed to cause more harm than good for a 2 year old patient of Ameloblastoma.

S. No. 9**Botox or Fillers? The Right Choice to Age in Reverse**

Dr. Simran Kaur

Dasmesh Institute of Research and Dental Sciences

Abstract

Facial volume depletion and facial rhytids are natural and inevitable part of ageing. Aesthetic medicine and aesthetic surgery involves techniques intended for enhancement of beauty and slow down ageing. Newer, non-invasive clinical therapeutics like injectable dermal fillers and botox neurotoxins offer viable alternatives for patient's seeking cosmetic enhancements. It is very important to appreciate what constitutes one's own perception of beauty and how the clinician can translate this into clinical results. The aim is to review what's the right choice of facial rejuvenating injectable filling agents i.e. Dermal fillers or Botox to reverse the signs of ageing. A literature review on use of botox injections and dermal fillers over recent years based on illustrative case reviews. The pursuit of beauty and efforts to reverse the effects of ageing dates back to centuries. Use of injectable agents to restore back youth is a non-invasive way with reduced risks as compared to invasive surgery. Although botox is often believed to be the mainstay of wrinkle treatment by general population, it can't be applied to treatment of all the wrinkles. Botox temporarily paralyzes local muscles by blocking the release of acetylcholine whereas dermal fillers restore facial volume loss and encourage natural collagen production. Botox are treatment of choice for dynamic wrinkles such as glabellar furrow lines, periorbital wrinkles and platysmal bands whereas dermal fillers are used to restore back volume loss and effectively smoothen static wrinkles.

Basics of Facial Transplantation

Dr. Sindhura Vinnakota

Maharana Pratap College of Dentistry and Research Centre

Abstract

Face transplantation is an innovative achievement of modern reconstructive surgery and is on the verge of becoming a common surgical opportunity. It offers an alternative approach towards restoring gross facial disfigurement. This paper highlights the basics of face transplantation and reflects on medical and surgical advancements in face transplantation surgeries along with complications, outcomes and long-term management strategies. Owing to the complex nature of the procedure, it bears a number of different risks. This paper also therefore outlines the stepwise process of conducting a facial transplantation with emphasis on key surgical principles. Careful patient selection, thoughtful informed consent and consideration of psychosocial impact of facial transplant are necessary to keep the procedure ethically sound. It is undoubtedly a highly technical and complex surgical procedure that requires a cohesive team approach.

S. No. 10**Advantages of 3D Printing in Diagnosis and Treatment Planning of Maxillofacial Trauma**

Dr. Shakeel Ahmad Mir, Dr. Chitra Chakravarthy

Navodaya Dental College Raichur

Abstract

Tumor may be defined as the abnormal mass of cells in the body which divide more than normal and does not undergo apoptosis on the

scheduled time. Tumors of maxillofacial region include tumors of neck and face (including oral cavity, salivary glands and temporomandibular joint). Use of traditional clinical treatment for maxillofacial tumors include radiotherapy, chemotherapy and surgery were destructive to the host resulting in unsatisfactory therapeutic outcome. Introduction of 3D printing technology has lead to better diagnosis and treatment planning rather than conventional methods. 3D manufacturing method is based on computer based models and has lead to better anatomical analysis of the lesion and fabrication of the defect in a layer by layer fashion. Which results in more accurate reconstruction of maxillofacial defects and improved aesthetics. Use of 3D printing technology in maxillofacial region has lead to better diagnosis and treatment planning of maxillofacial tumors with the benefit of restoration of optimal function, improved aesthetics, patient satisfaction and precise translation of the treatment plan.

S No. 11 Comparison of Clinical Outcomes and Oral Health Related Quality of Life Between Diabetic and Non-diabetic Patients in the Management of Odontogenic Space Infections

Dr. Shalini Agarwal

Manipal College of Dental Sciences, Manipal

Abstract

A poor glycemic control makes the patient prone to infections; odontogenic infections being common, owing to systemic hyperglycemia resulting in derangement of the immune system, including neutrophil function, cellular immunity, and complement function. The aim of the present study was to compare the clinical outcomes and oral health related quality of life between diabetic and non-diabetic patients in the management of odontogenic space infections. This was an observational, prospective time bound hospital based study conducted on a sample of 34 patients. Ethical clearance was taken from institutional ethical committee and informed consent was taken from the participants. Demographic details like age, gender of subjects was recorded. Laboratory investigations and pus samples for culture and sensitivity and isolation of causative organism were also noted. Statistical analysis was done using SPSS 25 software. Our results were in harmony with previous studies recorded in literature. Satisfactory resolution of infection was seen following surgical drainage with adjuvant antimicrobial therapy consisting of amoxicillin/clavulanic acid and metronidazole, provided diabetic patients had adequate glycemic control. WBCs in diabetic patients at admission time were higher than in non-diabetic patients. Quality of life was seen to be higher in non-diabetic patients compared to diabetic patients after an odontogenic space infection, owing to shorter hospital stay and lesser rate of complications.

S. No. 12**Orbital Exenteration: A Surgeon Dilemma in Management of Rhino-Orbital-Cerebral Mucormycosis****Abstract**

Mucormycosis is an uncommon, rapidly progressive, commonly fatal, opportunistic, fungal paranasal sinus infection. Concomitant surgical debridement of necrotic tissue remains a key feature of management along with anti-fungal therapy. Orbital exenteration has been one of the surgical standard for rhino-orbital mucormycosis. The post-covid Surge of mucormycosis has brought the clinicians to an understanding

that this radical approach need not be the mainstay for holistic treatment. The most critical decision in the surgical management of orbital mucormycosis is whether the patient should undergo orbital exenteration to prevent ascending dissemination of mucor. If the patient dies under medical treatment without exenteration, question arises if exenteration could have prevented subsequent neurological deficit? Conversely, if the patient is exenterated and survives, the question may be whether a lifetime of disabling surgery was a necessity. In the following presentation we want to share our experience.

Results of Orbital Decompression in Mucormycosis Cases Along With Maxillofacial intervention

Dr. Shweta Bhatnagar

Bundelkhand Medical College, Sagar

Abstract

Results of orbital decompression in mucormycosis cases along with maxillofacial intervention.

Introduction

Orbital mucormycosis either extraconal or intraconal is always poor prognostic sign and orbital exenteration was only treatment reliable. We found encouraging results in covid associated mucormycosis with local orbital debridement along with involved facial bone debridement.

Aims and Objective

To evaluate the effects of partial orbitectomy in resolution of orbital symptoms.

Methods

It's a retrospective study done on 85 patients. 43 had orbital involvement. 24 needed surgical intervention along with peribulbar/retrobulbar injections of Amphotericin-B. Six had orbital involvement along with adjacent maxillary or zygoma involvement. Infected orbital bone and fungal mass was removed along with Maxillectomy and zygomaticectomy was done when required. Resolution and progression of symptoms were evaluated.

Results

Total cases—85.

Surgical intervention—24.

Peribulbar/retrobulbar Injection—18.

Local orbital debridement + peribulbar injection—5.

Reintervention after local debridement—1.

Orbital debridement FESS + peribulbar injection—6.

Orbital debridement + maxillofacial intervention + peribulbar injection—6.

Exenteration—6.

Post exenteration—3.

Out of 18 patients 17 who underwent orbital debridement have done well with no further progression of disease. Out of six patients who underwent debridement through maxillofacial intervention 4 had complete symptomatic relief with recovery of all ocular movements and ptosis. 2 patients had no further progression of disease and symptoms (only ptosis).

Conclusion

Orbital mucormycosis is a very poor prognostic sign. Exenteration was the only reliable treatment but covid associated mucormycosis is because of temporary immunosuppression so less radical interventions is an option.

Reference

1. Songu M, Unlu HH, Gunhan K, Ilker SS, Nese N. Orbital exenteration: A dilemma in mucormycosis presented with orbital apex syndrome. *Am J Rhinol.* 2008 Jan-Feb;22(1):98–103. <https://doi.org/10.2500/ajr.2008.22.3121> PMID: 18284868.

S. No. 13

Evaluation of the Efficacy of Topical Metronidazole-Chlorhexidine Combination Gel in the Healing of Intraoral Incisions: A Split Mouth Comparative Study

Dr. Nupur Kalyani

Yenepoya Dental College

Abstract

To prevent infections in healing of intraoral incisions, various antimicrobials and antiseptics like chlorhexidine and metronidazole have been used. Topical antibiotics have been shown to be effective in controlling intraoral infections. The combination of metronidazole-chlorhexidine gel has been used for oral ulcers and gingival inflammation, however there are no studies of its use in the healing of oral incisions. This is the rationale of this study. This split mouth study comprised of 15 participants (30 intraoral incisions—15 control sites and 15 study sites). All participants received more than one intraoral incision either simultaneously or at spaced intervals for various minor and major surgical procedures. Incisions placed on the left side and in the mandible (in case of incisions placed in the upper and lower vestibules simultaneously) received Metrogyl DG forte gel and incisions placed on the right side and in the upper vestibule were considered as control sites and were allowed to heal naturally. Pain and healing were assessed using VAS scale and healing index by Landry et al. respectively. The study sites showed better wound healing and decreased post operative inflammation compared to the control sites. The post operative pain in the study group in minor surgeries was less compared to the control group, however there was no difference between the two groups for major surgical procedures. The combination gel of metronidazole-chlorhexidine improves healing of intraoral incisions and reduces post operative inflammation and pain.

S. No. 14

Cyanoacrylate Tissue Adhesive or Silk Suture For Closure of Wound Following Surgical Removal of an Impacted Mandibular Third Molar: A Randomized Comparative Study

Dr. Nusrin Thoniyott Purayil

Yenepoya Dental College

Abstract

Surgical extraction of impacted third molars has become a routine procedure in most of dental clinics. Tissue adhesives based on Iso amyl 2-cyanoacrylate is employed as a non-suture method for intraoral postsurgical wound closure. The objective is to compare the efficacy of cyanoacrylate (soft tissue glue) placement after surgical removal of impacted mandibular third molar. 14 patients were included in this study with two groups (Study and control groups)

each with submerged impacted mandibular third molar (class II position B according to Pell and Gregory's classification). After the surgical extraction of impacted teeth the flaps were closed using Iso amy 2 cyanoacrylate soft tissue adhesive in the study group and using 3/0 silk sutures in the control group. Patients were evaluated for closure time, pain, bleeding, and wound healing. The data analysis showed that the time taken for closure of mucoperiosteal flap was significantly less than with suturing. There was no significant difference in the severity of pain, postoperative bleeding and wound healing between the two methods. This study suggested that the efficacy of both, cyanoacrylate and suturing in wound closure were similar in the severity of pain, bleeding and wound healing, but use of cyanoacrylate showed time saving. However more studies on a larger population should be done in future.

“The Healing Touch”: Impact of Low-Level Laser Therapy on Healing of Third Molar Surgery

Dr. Shubham Tamrakar

Rishiraj College of Dental Sciences and Research Centre

Abstract

In the quest of finding methods to hasten bone healing/regeneration and to reduce patient discomfort associated with surgical extractions, researchers have elucidated several methods which include mechanical stimulation, electromagnetic fields, low intensity ultrasounds, bioactive materials, biological growth factors and low-level laser therapy. Laser energy can enhance osteoblastic proliferation, collagen synthesis by fibroblasts, activation of lymphatic system, proliferation of epithelial cells and fibroblasts, increased angiogenesis and bone formation. This study was planned to evaluate the pain, swelling, trismus, dry socket and healing index of extraction wounds of surgically removed impacted mandibular third molars after administration of low-level laser therapy. 20 patients were included in the study on the basis of exclusion and inclusion criteria and underwent third molar surgery followed by LASER biostimulation over socket intraorally and extra-orally on predefined points over masseter muscle. All criteria to be evaluated were examined clinically, surgically and observations were recorded in master chart under set criteria and subjected to statistical evaluation and results were tabulated. To conclude the impact of Low-Level Laser Therapy was very effective and patients exhibited minimum pain and trismus whereas moderately reduced the swelling and although there were no cases of dry socket, it moderately impacted the healing index of extraction sockets after bio-stimulation of the socket after mandibular third molar surgery.

Surgeons Caution!!! Is Your Patient on Oral Anticoagulants?

Dr. Leyons Augustine

Mar Baselios Dental College

Abstract

Patients on oral anticoagulants are at high risk of bleeding due to effect of these drugs at various steps of the coagulation cascade. Though these medications have been introduced to improve patient compliance and better side effect profile, thorough medical knowledge and foresight about these drugs are needed to anticipate the complications as

well as to treat them in the peri operative period. A literature search was conducted using key words “novel oral anticoagulants”, “anti-coagulants in dentistry”, “bleeding”, “dabigatran”, “rivaroxaban”, “apixaban”. For minor procedures anticoagulants need not be stopped prior to procedure. It is advisable to discontinue anticoagulants for intermediate-high-risk surgeries and restart these medications as early as possible, though clear guidelines are lacking. With the advancement in medical science and complications of coagulopathy due to COVID-19 the use of oral anticoagulants has increased tremendously. It is advisable to know the medical conditions for which the drug has been initiated for the patient like valvular heart disease, post Covid-19 status, Post DVT/PE. Complication of continuing these medications like bleeding, hematoma as well as complications of discontinuing them like a life-threatening thromboembolic event should be kept in mind. Prompt history taking, medication review and good knowledge of medical condition, treatment options available are the key to a successful clinical practice.

S. No. 15

Versatility of Superficial Cervical Plexus Block in Maxillofacial Procedure: A Clinical Study

Dr. Angela Alex, Dr. Bobby John

GDC Kottayam Kerala

Abstract

The cervical plexus is a network of nerves formed by communications between the anterior rami of the upper 4 cervical nerves. Cervical plexus block was first performed by Halstead in 1884. The Superficial cervical plexus block (SCPB) has been well described for anaesthesia of the neck, submandibular area, and the ear lobe. Pain management is a critical component in maxillofacial surgery. The effective use of local anaesthesia by SCPB can provide both patient comfort and safety to perform surgery in deeper planes of the neck and peri-mandibular region. The aim is to assess the pain score during the procedure using universal pain assessment tool. This experimental study was conducted in 30 patients with mandibular angle fractures, grouped as 2 groups, IANB, SCPB and IANB alone group, in department of oral and maxillofacial surgery, GDC Kottayam during a period of 1 year. Statistically significant difference was obtained between the two groups with less pain scoring during surgery in patients given LA by SCPB + IANB. Superficial cervical plexus block with concomitant inferior alveolar nerve block has a high success rate, low complication rate, low pain scoring and high patient acceptability.

Category: New Technology/Research

The Cutting Edge in Oral and Maxillofacial Reconstruction: Novel Method to Rehabilitate Post Mucormycosis Maxillectomy Defect using Patient Specific Custom-Made Implant

Dr. Nehal S. Patel

Abstract

Background

During second wave of COVID 19 pandemic India has witnessed heavy surge of mucormycosis and due to aggressive nature of disease

majority of these patients had undergone maxillectomy and primary closure. It is estimated that around 6000–7000 cases of mucormycosis were reported from April–June 2021, functional rehabilitation of these patients is major challenge due to absence of sound bone for conventional rehabilitation.

Research Aim

Aim of this research is to utilize virtual surgical planning and 3D printing to design patient specific implant utilizing sound zygoma bone as mechanical retention for rehabilitation of post mucor defect which can be placed surgically with minimal incision to reduce surgical morbidity and prosthetically it can withstand biting force for normal function.

Method

Total 6 patients who underwent maxillectomy due to mucor during first wave of COVID and who were disease free clinico-radiographically 6 months after surgery were rehabilitated by using PSI. 3-piece PSI was designed after obtaining CT scan, Implant was designed in such a manner that it can take maximum mechanical advantage of zygoma body and can be placed with small incision over there. Bar prosthesis is fixed using 4 multiunit abutments attached to implant along with two side stress breakers to distribute and reduce biting force.

Result

Finite element analysis of PSI to compare bending force with conventional zygoma implant is suggestive of equal strength of PSI. First patient had prosthetic loosening 1 month post placement because of sequencing of surgery which was rectified in subsequent surgeries. Tissue healing around polish collar of implant was good and there was no dehiscence.

Conclusion

Use of VSP and 3D printing to rehabilitate post mucor maxillectomy defect can help to reduce surgical morbidity to give optimal functional outcome.

How Steriolithographic Models Enhanced Our Surgery Over Last Fourteen Years

Dr. Annuradha Dey, Dr. Mukherji Srijon

Calcutta Institute of Maxillofacial Surgery and Research

Abstract

Background

Surgery to restore the form, function, esthetics and quality of life requires the impeccable planning. One needs to choose the surgery with highest effectivity and reducing the surgical time. (1) Least tissue manipulation but best outcome is the key to surgical excellence. The CAD CAM replication of CT scans has aided us in achieving a better surgical planning (2) of complex cranio-maxillofacial deformity correction or reconstructions.

Objective

Exploring the versatility of use of steriolithographic models in day to day maxillofacial surgery; using it as a convenient tool rather than a novelty showed to have direct impact on outcomes.

Method

The cases where steriolithographic models were used in planning and templating at Calcutta Institute of Maxillofacial Surgery and Research, Kolkata by a single surgical team for past 14 years were included. The type of surgeries, where the models were used, broadly classified into 9 types. We would be presenting at least one of each such type of surgery in this presentation, emphasizing on how the steriolithographic models were used to our advantage.

Conclusion

Steriolithographic models are a cost effective tool to be used more and more in general Maxillofacial Surgery to advance planning, improve operating techniques, reduce operating time and exposure and to improve predictability of surgical outcomes.

References

1. Pushkar Mehra, Jeremy Miner, Richard D'Innocenzo, Mohammed Nadershah, Use of 3-D Stereolithographic Models in Oral and Maxillofacial Surgery, *J. Maxillofac. Oral Surg.* (Jan-Mar 2011) 10(1):6–13.
2. Douglas P. Sinn, Joseph E. Cillo Jr, Brett A. Miles, Stereolithography for Craniofacial Surgery, *The Journal of Craniofacial Surgery*, Volume 17, Number 5, September 2006: 869–875.

Facial Reconstruction Technology: 3 D Printed Titanium Implants for Orbit, Baby Steps for the Paradigm Shift in the Future of Facial Reconstruction

Dr. Kiran Kumar Boyina

AIIMS, Bhubaneswar

Abstract

Reconstruction of the face and indeed the orbit, poses a serious challenge to the surgeon; hence the present study intends to throw light on the future of reconstruction strategies and describe/evaluate the most anatomically accurate virtual treatment planning and defect-specific implant technique, enumerating postoperative functional and aesthetic outcome. The study highlights a valid application of three-dimensional models and computer-guided surgical splints. The current study included 5 patients with a severe form of craniofacial fibrous dysplasia involving orbits with a mean age of 19.6 years. Detailed pre-and post-operative ophthalmologic workups were documented for 1 year. All the participants showed improvement in eyeball position and movement. Visual acuity and intraocular pressure have returned to near normal values, and astigmatism was reduced significantly. No recurrence was noted in any of the subjects. The current technique was found helpful in reconstructing the complex orbital anatomy; however, long-term follow-up studies with more patients are recommended.

Mandibular Fracture Healing In Traumatic Brain Injury: A Prospective Case–Control Study

Dr. Nithin Sylesh R.

Ganga Hospital

Abstract

Background

The phenomenon of accelerated healing in presence of traumatic brain injury (TBI) is seen in long bone fractures¹. However, very few studies have been done to evaluate the same in mandibular fractures.²

Aim and Objectives

To assess if the concept of accelerated bone healing occurs in mandibular fractures in the background of TBI and to evaluate the efficacy of ultrasonogram in assessing bone healing.

Materials and Methods

Prospective case–control study over a period of 18 months.

Group 1—Control group—Mandibular fractures without TBI.

Group 2—Study group—Mandibular fractures with TBI.

Clinical, neurological and radiological examination was done for all patients. Post-operative assessment of callus formation at the fracture site was done in 1st, 2nd, 3rd and 4th week by high frequency ultrasonogram linear transducer probe 6–15 Hz). Influence of associated injuries, the type and timing of fixation were evaluated. Statistical analysis was done by Independent *t* test and Chi square test.

Results

Group 1–30 cases, Group 2–15 cases. The signs of earliest callus formation were seen between 2–3 weeks in patients with TBI and after 3 weeks in the control group. The level of Glasgow Coma Scale significantly correlated to the rate of healing. The other factors did not influence the healing as significantly.

Conclusion

Traumatic brain injury has positive influence on the rate of healing in patients with mandibular fractures. Ease, convenience, accuracy and low cost makes ultrasonogram (with a high frequency probe) efficacious in evaluating mandibular fractures, without any radiation concerns.

References

1. R Perumal et al., Does accelerated bone healing associated with traumatic brain injury occur in open fractures. *Int. J. Orthop. Sci* 2018; 4(2): 677–681.
2. Wei Huang et al., Does traumatic brain injury result in accelerated mandibular fracture healing? *J Oral Maxillofac Surg* 70:2135–2142,2012.

Assessment of Versatility of Rapid Prototyping Technology in Oral and Maxillofacial Surgical Procedures: A Clinical Study

Dr. Nitish Chandra Gupta

Subharti Dental College, Swami Vivekanand Subharti University

Abstract

Background

Rapid prototyping was introduced in 1980s, to define new techniques for the manufacturing of physical models based on CAD-CAM. With the advent of newer technologies, it has become easier to plan and execute procedures and also to anticipate complications.

Objectives

1. To evaluate the efficacy of rapid prototyping as an educational and diagnostic tool.
2. To evaluate efficacy of rapid prototyping in treatment outcomes.
3. To evaluate efficacy of rapid prototyping in maxillofacial trauma.
4. To evaluate efficacy of rapid prototyping as a surgical stent.

Methods

Patients were selected from the OPD followed by CT/CBCT was obtained and converted into STL (standard tessellation language) file using software like MIMIC. This STL file was used to obtain three-dimensional printed model from STRATASYS printing machine. These models and surgical stents were used for various clinical applications in diagnosis, patient education, and treatment.

Materials Used

*Polylactic acid.

Results

We were able to transfer pre-operative plan successfully using surgical guide. Duration of surgery was significantly reduced and hence the complications associated with general anaesthesia were minimal. 3D model also helped under graduate students in better understanding of various pathologies and anatomy. Use of 3D models also helped patients to make informed decision.

Conclusion

Complex surgical procedures, especially those related to craniofacial structures, appear to benefit significantly from the preplanning and use of surgical guide. In the future, 3D biomodels may become an adjunct in maxillofacial surgery.

References

1. Raphael O, Herve R. Clinical Applications of Rapid Prototyping Models in Cranio-Maxillofacial Surgery. *Advanced Applications of Rapid Prototyping Technology in Modern Engineering*. 2011; 176–206.
2. Olszewski, Raphael. (2013). Three-dimensional rapid prototyping models in cranio-maxillofacial surgery: Systematic review and new clinical applications. *Proc Belgian R Acad Med*. 2. 43–77.

Applications of Artificial Intelligence Based Prediction of Extraction Difficulty for Mandibular Third Molar

Dr. Anil Managutti, Dr. Ujjaval Bhavsar

Narsinhbhai Patel Dental College and Hospital Visnagar

Abstract

Application of AI in oral and maxillofacial surgery is limitless. Advanced computer techniques have gained importance in many areas of dentistry that improves diagnoses and treatment planning. Emerging digitalization in dentistry leads to generate big data from patient. Processing this large amount of data needs fast and efficient computer algorithms. AI uses deep learning algorithm with convolutional neural networks which are based on networks that replicate the mechanism of human neurons. These models have replaced the traditional methodology in detection and diagnostic system by allowing extrapolation from associated databases to be actively learned over time. Today, AI has been used in detection of cancerous lesions of tongue, in the computation of facial attractiveness for cosmetic surgery, in the identification of mandibular canal involvement in dentoalveolar surgery. Using deep learning in the dentistry, these models are considered as black boxes as they increase in performance and they become less explainable. CNN'S are most efficient as it showed excellent outcomes in the analysis of radiographic images. This paper proposes a CNN based deep learning model for predicting the difficulty of extracting a mandibular 3rd molar using a panoramic radiograph. 200 patients are taken for the research with each pre-operative and post-operative radiographs. The data to be entered in the classification model is 1000 radiographs and the classification model used is Resnet34 pretrained on a imageNet dataset. The evaluation is based on 3 criteria: C1, C2, C3 i.e. depth, ramal relationship and angulation respectively using the Pederson difficulty score.

Visual Workflow Tools to Predict Recurrence After Resection: Novel Prognostication Using Gantt Charts and Kanban Boards for Maxillofacial Surgery

Dr. Nakul Uppal

All India Institute of Medical Sciences, Raipur

Abstract

Background

Resection of a part of the jaws is required in invasive pathologies such as tumours or osteomyelitis. The multi-factorial etiology of recurrence coupled with complex oro-facial anatomy mean that each step missed or compromised in the pre-operative workup, intra-operative procedure or post-operative follow up of jaw pathologies significantly raises the risk of recurrence of pathology.

Research Aims

To determine the use of visual workflow tools in identifying key steps to reduce the risk of recurrence of jaw pathology after surgery.

Methods

The prototype jaw pathology used to assess visual workflow tools was Maxillary Mucormycosis. The visual workflow tools utilised were Gantt charts and Kanban boards. Data corresponding to key steps in pre-operative, operative and post-operative course of each patient were visually represented on Gantt charts and Kanban boards.

Results/Findings

A time-plot was used to chart the progress of each operative patient chronologically using a Gantt chart. It was easily possible to identify lack of responders to treatment from the time-plot. Marking the occurrence of expected causes of recurrence helped identify recurrence more quickly than the traditional empirical method of bedside assessment. Gantt charts were found to be useful to chart the post-operative course of surgically operated jaw pathologies. Kanban boards were used to graphically plan treatment as well as track progress of operated cases of mucormycosis. Essential steps in the pre-operative workup were systematically depicted visually on a Kanban board, as a graphical form of pre surgical checklist.

Conclusion

In a teaching hospital the use of Kanban boards for pre-operative workup and Gantt chart for post-operative follow up reduce human error and improve patient prognosis by reducing factors that cause recurrence.

Newer Approaches to Hair Transplant: An Overview

Dr. Siddhartha Chatterjee

ABMSS, Kolkata Cleft Center

Abstract

The interest in hair replacement has significantly increased over the past ten years. Two out of every three men, and one in five women, suffer from hair loss. For men, the main cause of a diminishing hairline is heredity. Hormonal changes such as menopause can cause both thinning and hair loss in women. There are a number of hair replacement techniques that are available, although hair replacement surgery cannot help those who suffer from total baldness. Candidates for hair replacement must have a healthy growth of hair at the back and sides of the head. The hair on the back and sides of the head will serve as hair donor areas from where grafts and flaps will be taken. For those who have significant hair loss, surgical hair transplantation

is the only proven way to truly restore natural hair growth to areas that have become bald. Patients are hesitant to consider a surgical option, considering that recent advancements have made hair transplant surgery quite a bit easier on patients by reducing discomfort and downtime. The newer hair transplant procedures have a high patient satisfaction rate and also offer more natural-looking results. Patients additionally reported that the less invasive procedures are well worth the final outcome. The traditional FUE and FUT has been upgraded to Dhi, Robotics, Implanted pen, Long hair, Slitting methods, Punches, Machines, Slitting first, extraction later or reverse, Beard and Body hair transplant.

Finite Element Analysis of 3 Dimensional Plating System in Mandibular Angle Fracture Fixation

Dr. Ridhi Gaurang Matariya

Karnavati School of Dentistry, Gandhi Nagar, Gujarat

Abstract

Finite element analysis is commonly employed experimental research technique that enables us to study effects of geometrical and material variations under load and internal mechanical process. Angle is frequent site for fractures of lower jaw. It is hypothesized, that single matrix miniplate provides functional level of stability requisite of fixation with minimum operative time and relatively low complication. In this study, FEA was used to study stress distribution in fractured mandibular angle fixed with 3-D titanium miniplate. The results were contrasted with angle fracture, not stabilized by any plate. Aim is to evaluate biomechanical behavior of fractured mandible in cases of fractures of mandibular angle stabilized with 3-D miniplate using FEA. CT data of a patient was imported into CAD based medical software mimics. 3-D mandibular model was generated. Two fracture lines were created on it and segments were stabilized using 3-dimensional Plate and 8 monocortical screws. Masticatory loads were applied and stress pattern was studied. Von misses stress was obtained for entire mandibular model, 3-D plate, screws, cortical bone, cancellous bone, periodontal ligament. In design 1 and 2 majority of stress was taken up by plate and remainder of it was distributed between cortical bone and cancellous bone. In design 3, fracture line was not stabilized by any plate, thus cancellous bone received maximum amount of stress. FEA can provide an insight into complex biomechanical behaviour of craniofacial complex and mandible. But it is technique sensitive, requires expensive softwares and skilled analyst.

Honey: A Gentle Approach to Treat Aphthous Ulcer

Dr. Himani Garg

Abstract

Introduction

Honey is a viscous, supersaturated sugar solution derived from nectar collected and modified by the honeybee, *Apis cerana indica*. It is one of the oldest medicines known for the use in dressing wounds. Various clinical studies have found that infected wounds turn sterile in 3–6 days of application of honey as a dressing. There is evidence suggesting that honey may accelerate the wound healing.

Aims and Objectives

The aim of the study is to evaluate the application of honey in oral cavity for soft tissue ulcers like aphthous ulcer and alveolar osteitis. The objective of the study is to determine if honey can be used as a dressing for Aphthous ulcer and in Alveolar osteitis.

Materials and Methods

The study has used honey application with the aid of a cotton bud in patients with a mean age of 17–55 years. The patients had reported with ulcers in the oral cavity diagnosed clinically. The study was undertaken to evaluate the effect of honey dressing in the management of aphthous ulcers and alveolar osteitis.

Results

In this study, there was a significant reduction in inflammation, hyperemia, edema and exudation after honey dressing which results in reduction in post operative pain and leaves a soothing effect. No side effect of honey was observed in the study.

Discussion

It has also been reported that the honey dressing halts advancing necrosis. It acts as a barrier, preventing wounds from becoming infected, preventing cross infection and allowing burn wound to heal rapidly.

Intra Operative Imaging in Orbital Fracture Reconstruction

Dr. Suresh G.

Abstract

Injuries to the bony orbit are common among patients sustaining craniomaxillofacial trauma. The external orbital framework is disrupted in several different types of facial fractures. The integrity of the internal orbit can likewise be disrupted, either in isolation or as a component of complex midfacial or upper facial injury. The orbital skeleton provides support for the globe and ocular adnexa and houses neurovascular structures critical to normal visual sensory function. Surgical management of orbital skeletal injuries is fraught with potential peril, as dissection, bony mobilization, or placement of intra-orbital hardware may damage the globe or critical neurovascular structures. In this regard, advances in computer imaging have enhanced the surgeon's ability to safely dissect the internal orbit, have allowed for the design and manufacture of standard implants for orbital reconstruction, planning for correction of secondary deformities, quantitative assessment of fracture reduction and volume restoration, and have improved the ability to visualize, in real-time, the orbital anatomy during dissection. Intra-operative imaging is routinely used in orthopedic, spine surgery and neurosurgery to assess fracture repair in real-time. This allows the surgeon to evaluate the repair and make immediate changes in the operative management. Intra-operative imaging is not utilized as frequently in facial fracture repair, but is used in facilities that have the appropriate capability and resources. In this article we present 3 patients with traumatic brain injury and facial bone fractures, who underwent facial bone reconstruction primarily with virtual surgical planning (VSP), pre-bent implants on 3D printed model, scarless surgical access, intra operative 3D imaging, reconfirmed with post-operative images at Royalcare Superspeciality Hospital, Neelambur, Coimbatore which is the standard of care in managing such complex facial bone fractures in the western world.

Applications of LASER in Oral and Maxillofacial Surgery

Dr. Radha Prabhu

Abstract**Introduction**

The idea behind this presentation is to update the current uses of LASERs in ablative, reconstructive and minor oral surgery in day to day clinical practice.

Aims and Objectives

I aim to provide a gist of the concepts and the scientific basis for the rational use of Laser in Maxillofacial surgery.

Materials and Methods

The currently used lasers in our clinical practice will be described and reasoned.

Discussion

The LASERs available in the market, their scientific basis and design, their clinical applications, results obtained and the literature available on various applications in maxillofacial surgery will be discussed.

Summary

To summarize, this paper aims to throw light on history, advances and the future possibilities of LASER in clinical surgical practice.

Application and Scope of 3D Printing in Maxillofacial Surgery: A Review on Different Technologies and Materials

Dr. Triphi P. S.

A B Shetty Memorial Institute of Dental Sciences

Abstract**Background**

The present paper reviews the applications for 3D-printing in maxillofacial surgery. 3D printing is a versatile technique that allows the fabrication of fully automated digital work flow and treatment plans, thereby delivering personalized therapeutics and aids to the patients. A brief outlook on manufacturing methods of 3D printing and their current and future implications are also discussed.

Aim and Objectives

the aim of this review paper was to delineate the scope of modern techniques of 3D printing and akin in modern oral and maxillofacial surgery.

Methodology

A comprehensive electronic search was performed using pubmed, google scholar and cochrane data bases. The review included articles published between January 2000 to July 2021. The mesh terms used were 3D printing, facial reconstruction, maxillofacial biomaterials and maxillofacial surgery.

Discussion

In total 9 papers were included in the final review, the literature emphasized on various additive manufacturing techniques, bio materials in maxillofacial surgery, its application and scope in contemporary oral and maxillofacial surgical treatment.

Summary and Conclusion

The application of 3D printing expands the range of its applications in dentistry and oral surgery. Additive technologies will replace many stages or even the whole process of the conventional methods of treatment. 3D printing provides for a better educational tool in most surgical procedures, not only for practitioners, but also students. The implications of such technology is far reaching in modern oral and

maxillofacial surgery. It has a great potential in further research and treatment modalities.

A Rapid Mini-scoping Review of Feedback and Scaffolding Techniques for Skill Acquisition and Long Term Improvement in Maxillofacial Surgical Training and Education

Dr. Akilesh R.

Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Karaikal, Puducherry, India

Abstract

Introduction

Feedback and scaffolding is integral to surgical training and education. Literature has contradicting evidence about feedback and scaffolding in surgical sciences. Feedback and scaffolding must aim to balance short term improvement and long term skill retention without compromising patient safety or the morale of the trainee, tailored to the individual's place in the surgical pathway. This presentation will discuss the methods of feedback and scaffolding in maxillofacial surgery by pursuing three aims: (1) To present evidence from transdisciplinary domains (surgical and non-healthcare skill acquisition domains) on feedback and scaffolding. (2) To summarise these evidences and present important principles and practical considerations in providing feedback and scaffolding. (3) To provide an evidence gap map in the domain of maxillofacial surgical training for identifying potential areas of research in surgical education.

Methods

Rapid mini scoping review of evidence from transdisciplinary high skilled motor acquisition domains on the topics of feedback and scaffolding and discuss it as relevant to maxillofacial surgery.

Results

Literature has contradictory views on the topic of feedback and scaffolding. The best strategy leans towards constrained feedback, but it must be balanced to avoid the trainees from feeling abandoned. Scaffolding must balance attaining independence and competency with patient safety. Research in this domain in surgery is increasing, but could benefit from adapting the lessons learnt in other high skill long term training domains like training for competitive sports.

Discussion and Conclusion

Feedback and scaffolding must be balanced and tailored. Co-designing the process with trainees is essential for successful implementation and long term impact. Lessons from other high skilled motor skill acquisition domains like competitive sports can be beneficial. There is considerable gap in evidence in this domain in our field and we need more focused research.

Natural Bioceramics: EBONE™—Changing Perspective in Bone Regeneration and Reconstruction

Prof. Dr. Vivekanand kattimani

Sibar Institute of Dental Sciences

Abstract

Bone regeneration is the key to functional and esthetic rehabilitation. The goal of treatment always aims primarily to eradicate pathology

but also for faster recovery without any functional or esthetic disability.

Aim and Objectives

To assess the efficacy of EBONE™ for bone regeneration in the cystic bone defects of jaws; using digital radiography and CBCT.

Patients and Methods

Fifty bone defects secondary to cystic enucleation in jaws, (25 in each group) were evaluated in a randomized blind controlled study after EBONE™ grafting. The study was approved by the IEC and registered with CTRI. Clinical and radiographic evaluation was performed at baseline, 3rd, 6th, 12th-month intervals for bone regeneration using radiographic observer strategy (digital radiography and CBCT). The null hypothesis was used for testing.

Results

The graft group showed statistically significant changes initially and was persistent during follow-up visits. The grafted group showed the trabecular bone formation and decreased lesion size with uniform periodontal ligament space at the 3rd-month follow-up interval in comparison to control. The bone formation was significant in the grafted group compared to the control in all timelines.

Conclusions

Grafting enhanced bone regeneration compared to control. EBONE™ is safe, reduces morbidity and burden of the second surgery, associated with autografts. Because of the ease of handling, cost-effectiveness, and environment-friendly production; EBONE™ may emerge as a versatile novel bone graft substitute.

Platelet Rich Fibrin (PRF): A Divine Blessing for Dentistry

Dr. Nishant Kumar Tewari

Kiran Poly Clinic

Abstract

Wound healing is a highly coordinated sequence of biochemical, physiologic, cellular and molecular responses involving numerous cell types, growth factors, hormones, cytokines and other proteins, which is directed towards restoring tissue integrity and functional capacity after injury. The development of bioactive surgical additives regulating and enhancing healing and regeneration of tissues and bone remains one of the great challenges in clinical research. Platelets are one such cell type that play a predominant role in wound healing process because platelets contain many growth factors (like PDGF, IGF and TGF- β), which when secreted are responsible for increasing cell mitosis, increasing collagen production, initiating vascular ingrowth and inducing cell differentiation. PRF is a fibrin clot rich in platelets without addition of thrombin or calcium chloride during preparation. The absence of anticoagulant activates most platelets of the blood sample in contact with the tube walls and the release of the coagulation cascade in few minutes. Therefore, the speed of blood collection and transfer to the centrifuge is important, as with delay, the fibrin will polymerize in a diffuse way in the tube and only a small blood clot without consistency will be obtained. Platelet-rich fibrin (PRF) is derived from a natural and progressive polymerization occurring during centrifugation. A progressive or relatively slow polymerization mode may increase incorporation of the circulating cytokines in the fibrin meshes which are then released in a relatively long-term and controllable way which in turn will help in soft tissue healing, and accelerated bone regeneration. Clinical applications of PRF includes Socket Preservations, Oro Antral Fistula Repair, Sinus Lift, Leukoplakia Excision, Dry Socket management, Alternative to Bone Graft in surgical defects including third molar surgeries and

tumour/cyst enucleation. This paper will highlight the clinical applications of PRF.

Dr. Anagha S. Nath

Sree Mookambika Institute of Dental Science, Kulasekaram

Introduction

Maxillofacial surgeons face serious challenges in reconstruction of large defects caused either by congenital defects or by resection of large tumors or post traumatic defects. If reconstruction of oral and maxillofacial region can be done by reconstructing all the architecture layer by layer, it will give significant impact in both functional and in aesthetic part.

Aim and Objectives

Aim is to define concepts and advances in tissue engineering application in the field of reconstruction or restoration of oral and maxillofacial region. Objectives include application of tissue engineering in oral and maxillofacial reconstructive surgery include bone and cartilage regeneration, soft tissue regeneration, salivary gland regeneration and fat muscle and nerve regeneration.

Methods

Steps include in tissue engineering include cell harvesting, isolation, cultivation and proliferation of the cells into scaffold in the presence of growth factors (GF) or signaling molecules.

Conclusion

Our goal is to know how to regenerate human tissue from host cells and regenerate to have desirable function and aesthetics. Simple tissue has been successfully achieved to restore the defect, while in the case of complex and functional restoration researches are still going on. The future development of this field will have a significant impact in the field of reconstruction of maxillofacial defects.

References

1. Ceccarelli G, Presta R, Benedetti L, Cusella De Angelis MG, Lupi SM, Rodriguez y Baena R. Emerging perspectives in scaffold for tissue engineering in oral surgery. *Stem Cells International*. 2017 Feb 26;2017.
2. Schliephake H. Tissue engineering in maxillofacial surgery. *In* Fundamentals of Tissue Engineering and Regenerative Medicine 2009 (pp. 827–837). Springer, Berlin, Heidelberg.

Reconstruction of the Human Camera Station: Virtual Planning From a Concept to Creation

Dr. Priyanka S.

Madha Dental College

Abstract

Three-dimensional (3D) printing is cited as a “novel, fascinating, future-building technology”. It is also known as Rapid prototyping or additive manufacturing, and was first introduced in 1980s. They enable better planning and training for procedures as well as pre-fabricating of plates. Three dimensional surgical models have been utilized in craniofacial surgery for reconstruction of orbital fractures, harvesting bone grafts, tailoring bio-prosthetic implants, plate bending, cutting guide for osteotomies, and intraoperative oral splints. By using 3D models and guides, operative times are shortened and complications are reduced. In context of facial trauma, orbital wall

fractures are commonly seen. Reconstructive orbital procedures primarily aim to reconstruct pre-morbid bony anatomy to restore its function. Virtual Surgical Planning is an evolving tool in maxillofacial reconstruction that facilitates surgical repair and may optimize patient outcomes. Over the last few years, many exciting and new technological advances have occurred in Oral and Maxillofacial Surgery, and three-dimensional printing is one of them. This paper describes the 3D printing method and its role in Oral and Maxillofacial Surgery and also its application and benefits in orbital fractures and reconstruction.

Filling the Gap: Frontal Defect Correction with 3D Printed Peek

Dr. Shrenik Chouradiya

School of Dental Sciences, Krishna Institute of Medical Sciences

Abstract

Frontal bone deformities can be acquired due to various factors like trauma, tumor resection surgeries, osteomyelitis. It may also occur due to congenital malformations. Repair of these defects have long been a challenge to for surgeons. The aim of the study is to report 2 cases of acquired frontal defect treated with 3D Printed Peek Implant. Patients were subjected to CT scan. The DICOM file was sent for evaluation and customized PEEK implant was fabricated for patients. Implants were fixed under GA. All cases had good wound healing. There was no post operative infection or other complications. Patients were highly satisfied with postoperative esthetic correction. Reconstruction of the cranial defect can be undertaken as a primary or secondary procedure depending upon the duration, severity of injury, location of the defect and condition of the overlying soft tissues. Various grafts and alloplastic materials have been employed for the repair of cranial defects. The grafts used for reconstruction are mainly autogenous. Autogenous bone grafts are gold standard for cranial reconstruction but sometimes it is difficult to contour the graft according to cranial vault. Autogenous grafts also require a separate donor site surgery. Various alloplastic materials have been tried and tested to overcome these drawbacks. Among various alloplastic materials, polyetheretherketone (PEEK) has gained popularity in recent years, and has several advantages over other contemporary alloplastic materials. Though long-term studies are less, there is great prospect for innovation and future development in its surgical applications.

Reconstruction of Maxilla, the Novel Way: Arising from the Ashes of Revolution

Dr. Yukthi B. K.

The Oxford Dental College and Hospital

Abstract

Reconstruction of lost tissues of body has remained an enigma. But autogenous cancellous bone considered as a “gold standard” of bone replacement; it poses certain degree of donor site morbidity. To counter this, array of biomaterials has been utilized with variable degree of success. Poly-e-caprolactone is a novel, synthetic, biodegradable polymer, helps in regeneration of bone with desirable outcomes. A 25-year-old girl presents with chief complaint of

swelling in region of upper left back teeth for 2 weeks. Diagnosis was made as ameloblastoma of the left maxilla. Excision of the lesion was performed and implantation of the 3D-PCL scaffold with PRP and DBM and achieved primary closure. Also, a temporary prosthesis was given for immediate return of function. 1st week postoperatively was uneventful. Radiographs taken at 3rd and 4th month clearly showed increase radiopacity suggestive of de-novo growth of bone. This study has shown that polycaprolactone scaffold, an alternative to conventional bone grafting techniques and that it (1) Eliminates the need for an autogenous donor site; (2) Highly porous and honeycomb-like architecture, facilitates the infiltration of new osteoid and bone trabeculae. Treatment should be aimed at complete rehabilitation, with the placement of implants if indicated.

Sonoporation: Emerging Therapeutic Modality for Oral Squamous Cell Carcinoma

Dr. Devyani Bahl

A B Shetty Memorial Institute of Dental Sciences

Abstract

Ultrasound is a traditional non-invasive, diagnostic modality, which is now emerging as a promising therapeutic aid in medical and dental sciences. Sonoporation is a technique which employs the acoustic cavitation of microbubbles to generate transient, non-specific pores on membranes which increases the permeability to bioactive molecules. This in turn enhances the delivery of large molecules such as DNA into viable cells which can be used for enhancing local drug delivery systems, gene therapy and molecular biology. Oral squamous cell carcinomas are the most common type of malignant neoplasm. Although clinical treatment is generally accomplished with surgery in those cases, the prognosis is not particularly good and the use of antiproliferative agents, such as 5-fluorouracil, mitomycin C and BLM, has been reported to remarkably improve the therapeutic effect. Systemic administration of these drugs results in general toxicity, thus, to avoid unexpected complications, several local drug delivery methods have been rapidly developed. A required amount of drug concentration at the diseased site is achieved by local drug delivery while limiting toxicity for healthy tissues using sonoporation.

Customised versus Stock Total Joint Replacement in End-Stage TMJ Disease

Dr. Sudeep Subran

Background

End-stage TMJ disease adversely affects the quality of life and is often not amenable to conservative management. Management of end-stage TMJ disease needs to directed towards both pain alleviation and restoration of function. Total replacement of the affected joint is now an accepted modality of treatment of patients afflicted with end-stage disease.

Aim

This e-poster aims to compare total joint replacement performed using customised TMJ prosthesis and stock TMJ prosthesis.

Methods

Existing literature on custom and stock TMJ replacement has been reviewed and the findings correlated to the authors own cases. Pre-

operative planning, surgical time, joint mobility, and occlusal rehabilitation have been assessed.

Results

Preoperative planning is longer for custom fabricated joints, while intra-operative time is lesser for the placement of custom joints. Use of cutting and placement guides further reduce the operative time. There is no difference in joint mobility between either types of joints. However, both types of joints limit condylar translation. Though placement of stock joints is more technique sensitive occlusal discrepancies reported are comparable to that reported for custom joints.

Conclusion

Rehabilitation of end-stage TMJ disease using Custom Joints or Stock Joints are both viable options. Reduction in operation time and possible complications arising from extended surgical time is the most likely benefit of custom fabricated joints vis-a-vis stock joints.

Patient Specific Implant for Maxillary Defect

Dr. Eleng Kumaran

Sri Ramachandra Institute of Higher Education and Research

Abstract

Reconstructing maxillofacial defects is quite challenging for most surgeons due to the region's complex anatomy and cosmetic and functional well being patients. The use of pre-made implants and autogenous grafts is often associated with many limitation. Recent technological advances have led to the use of custom made computer-designed patient-specific implants (PSIs) in reconstructive surgery. This study describes our experience with PSI, details the complications, how to overcome them, and finally, evaluates outcome.

Impacted Foreign Body in Mandibular Region: A Case Report

Dr. Priyanka Gupta

School of Dental Sciences, Krishna Institute of Medical Sciences, Maharashtra

Abstract

Introduction

Penetrating injuries to the maxillofacial region are very common. The injuries caused due to foreign object can lead to severe infection and functional deficit if prompt diagnosis and treatment isn't carried out. Since face is considered as the zone of aesthetics, any facial defect further requires reconstruction.

Aims and Objective

To report a case of traumatic foreign body impaction in maxillofacial region in a construction worker.

Materials and Methods

The impacted foreign body was removed under general anesthesia. All loose bony fragments and torn muscles were removed. To correct post-operative occlusal derangement, patient was put under inter-maxillary fixation (IMF) for 3 weeks.

Results

The healing of wound was uneventful. Post operative occlusion was satisfactory after 3 weeks of IMF. There were no post operative complications.

Discussion

Foreign objects can penetrate deep into soft and hard tissues through open wounds and lacerations which are sustained during trauma. They can result in serious complications. Infection resulting from the retained foreign particle may lead to complications such as abscess and fistula formation. Metallic objects are radio-opaque and are mostly clearly visible on plain radiographs itself. Mandibular defects following aggressive surgery impact both form and function and require a multidisciplinary approach to optimize functional and cosmetic outcomes. Thorough reconstructive strategies require the restoration of facial dimensions, including width, height, and projection. However an optimal reconstructive option can lead to donor site morbidity or can be costly to the patient.

Perkins Tonometer: A New Tool in Maxillofacial Surgeons Armamentarium to Avoid Needless Blindness: A Prospective Clinical Study

Dr. Rajagiri Bala Sundara Raju

Anil Neerukonda Institute of Dental Sciences

Abstract

Autoregulation of intraocular pressure (IOP) is a capacity to maintain relatively constant levels of blood flow in the presence of changes in ocular perfusion pressure and may get affected by acute trauma like orbitozygomatic fractures. These fractures may alter intraocular pressure and may need close monitoring perioperatively. To study the effect of orbitozygomatic fractures, anesthetic drugs on intraocular pressure by using a portable Perkins Tonometer. Assessment of intraocular pressure preoperatively, intraoperatively, postoperatively using Perkins's tonometer on both eyes. The present study revealed changes in IOP in the affected eye compared to unaffected eyes and was found to be statistically significant. Portable Perkins tonometer is an additional tool in maxillofacial surgeon's armamentarium to evaluate the IOP in orbitozygomatic fractures to prevent ocular complications and eliminate blindness.

Comparative Evaluation of Left Hand Surgical Dexterity Before and After Motor Skill Exercise among Oral and Maxillofacial Surgery Residents

Dr. Harshal Kunjir

Dr. D. Y. Patil Dental College and Hospital

Abstract

This observational study was conducted to train the surgeons so that they are able to operate on the patients competently and safely. The aim of the study was to evaluate left hand surgical dexterity before and after 21 days of motor skill exercises in oral and maxillofacial surgery residents and to compare its effectiveness in acquiring left hand surgical dexterity. An Observational study was carried out in 31 right-handed residents of Oral and Maxillofacial Surgery Department, Dr. D.Y. Patil Dental College and Hospital, Pune. Residents were asked to do the exercise for next 21 days and follow up was taken every day. Motor skill exercise included molding of clay with left hand, Exercise with hand Gripper, Painting with left hand, Holding gauze with chop sticks. Comparison of left-hand dexterity pre and

post motor skill exercise was done. Time taken to hand tie 3 knots of sutures was increased and the values of Baseline Hydraulics Hand Dynamometer and Baseline Hydraulics Pinch Gauge were increased post motor skill exercises. Suturing task time improved after the course. Each participant's level of grip strength and pin strength was increased.

Botulinum Toxin Type A on Facial Lacerations: Face the Facts

Dr. Yoshita R. Gowda

ABSMIDS**Abstract**

The face plays a very important role in forming initial social relationships. The trauma due to facial injury can have a lasting impact on the patient's mental health. This can last beyond the clinical stages of wound healing. The scar formed due to a facial laceration is a deliberate reminder of the incident. Over the years several methods have been utilized to fasten and improving the healing process and the subsequent scar formed. It has been proven that tension on the wound edges and mechanical microtrauma during the initial stages of wound healing increases healing time, and the collagen is deposited. This leads to a poorer scar. Several surgical concepts like layered suturing, undermining of the skin edges, orienting the repair along the RSTL (Relaxed Skin Tension Lines) have been utilized to counter this. Recently, Botulinum toxin type A, a neurotoxin, has been shown to cause chemo-denervation of the wound edges. The microtrauma is eliminated. However, there is a paucity of data on the efficacy of using this paralytic agent in clinical settings, and there is no standard protocol on the reconstitution methods, amount of toxin injected, clinical indications, storage methods, or ways to handle its complications. Hence, a literature review was done to study the effectiveness of botulinum toxin type A on facial lacerations.

Nano Hydroxyapatite Gel and Osteointegration in OMFS: A Literature Review

Dr. Varun Kumar Tripathi

AB Shetty Memorial Institute of Dental Sciences

Abstract

Management of various pathologic lesions of jaws due to maxillofacial trauma, post-traumatic defects, major pathologies involving cysts and tumors, oro-antral communication, cleft palate patients, etc., often need partial and total resection along with the surrounding structures, producing defects of varying sizes. Reconstruction of such defects is important for the restoration of function and aesthetics. Autogenous bone grafting is the gold standard for reconstruction because of its excellent bone regeneration capacity. In recent times, the larger defects are repaired by using vascularized and non-vascularized bone grafts. Alternative graft materials include allografts, xenografts, and alloplastic bone grafts which are utilized in the clinical setting, but these also have their own drawbacks, like, high cost, limited osteoinduction capacity, and potential for disease transmission. Due to these limitations of reconstructive techniques, new avenues in regenerative medicine and tissue engineering are being explored to restore anatomy and function. To regenerate any tissue, a

source of stem cells, a 3-D scaffold, and a source of signaling molecules are needed. Hydroxyapatite (HA) is a ceramic with a chemical composition similar to the bone that possesses good properties of ideal hardness, biocompatibility, low in-situ biodegradation, osteoconductivity, a certain degree of bioactivity, and high resistance to moisture, and has been used in a variety of oral and maxillofacial applications.

Employment of Artificial Intelligence in Intelligence

Dr. Abu Talha

Jaipur Dental College

Abstract

Recent decades have witnessed the genesis and progressive application of intelligent machines and computer programs that have the ability to process information and execute cognitive functions similar to those of human logic and reasoning such as problem solving and decision making. Over the last few years, translational applications of so-called artificial intelligence in the field of medicine have garnered a significant amount of interest. The present paper aims to review existing dental literature that has examined deep learning, a subset of machine learning that has demonstrated the highest performance when applied to image processing and that has been tested as a formidable diagnostic support tool through its automated analysis of radiographic/photographic images, and potential future applications of artificial intelligence in the field of orthognathic surgery. The last five years have shed some light on very promising applications of artificial intelligence in radiology, dermatology and oncology. Nonetheless, this paper will review in forthcoming sections, the benefits that this class of computational methodology can bring to dental research and practice have yet to be determined.

Versatility of i-PRF (Injectable Platelet Rich Fibrin) in Oral and Maxillofacial Surgery: A Review

Dr. Prathiba S.

AJ Institute of Dental Sciences

Abstract

Platelet-rich fibrin is the most innovative and commonly applied platelet concentrate in Oral and maxillofacial surgery. The main difference of i-PRF from solid PRF is the lower speed and time in centrifugation. Taking advantage of slower and shorter centrifugation speeds, a higher presence of regenerative cells with higher concentrations of growth factors can be obtained when compared to other formulations of PRF utilizing higher centrifugation speeds. The i-PRF being the newest generation of platelet concentrates, very less review studies are available at present. This review establishes the advantages and disadvantages of using i-PRF in oral surgery of and its versatility in various uses. As part of the review process, the literature was searched for published studies relating to i-PRF and oral and maxillofacial surgery from 2017 to 2021. Overall, this review article focuses on the current status of i-PRF formulation advantages and uses in oral and maxillofacial surgery along with the healing process. The i-PRF has been very promising for injections into soft and hard tissues for healing (ranging from extraction sockets to

osteoradionecrosis) in treatment of various scars, TMJ pain, androgenic alopecia etc. However, low speed centrifugation being a recent concept established in 2017, more data on a long-term basis will be needed to draw prompt conclusions regarding the benefits of i-PRF in oral and maxillofacial surgery.

Chronic Sclerosing Sialadenitis

Dr. Sathvik Mavinkurve S.

Vokkaligara Sangha Dental College and Hospital

Abstract

Sialolithiasis is common, affecting approximately 1% of the population. The submandibular gland (SMG) is most frequently affected, as 80–90% of stones precipitate in Wharton's duct. Sialolithiasis may be entirely asymptomatic. Chronic and acute suppurative sialadenitis are distinct entities. In fact, approximately one-third of patients with chronic sialadenitis will have no discernible sialoliths on endoscopy or imaging. We present here a case of 36 years old male patient who gave a history of swelling in the left submandibular region from past 3 years, USG and CBCT revealed multiple radiopaque structures within the gland and Wharton's duct, also associated with fibrosis of the gland and duct. These findings were not conclusive of diagnosis, thus surgical excision and histopathological considerations to rule out various diagnosis suspected was needed.

Category: Student: E-Poster

Theme : Cleft & Craniofacial Anomalies

Reg. Num.: 152

Nasoalveolar Molding: A Pre-surgical Tool to Bridge Smiles in Cleft Patients

Dr. Jnana Pallavi Parvathaneni

Drs. Sudha and Nageshwara Rao Siddhartha Institute of Dental Sciences

Abstract

Cleft lip and palate are one of the most common oro-facial deformities. Management of these deformities pose challenges to a surgeon in reconstruction of facial soft tissue contours especially lip and nose. There are numerous surgical techniques described by various authors for the correction of various clefts, but wide and bilateral types still have been posing challenges to achieve functional and cosmetic results. In order to overcome these, a pre-surgical infant appliance i.e. NASOALVEOLAR MOLDING (NAM) is introduced. NAM has been proved to be an effective, adjunctive, nonsurgical therapy for cleft lip and palate repairs which works on the principle of 'negative sculpturing' and 'passive molding' of the alveolus and adjacent soft tissues thereby reducing the severity of the initial cleft lip, palate, alveolar and nasal deformities prior to surgery. Apart from the benefits, it improves psycho-social relief of the infant's family and also reduces the overall cost of cleft care, thereby reducing the number of subsequent surgeries.

In my presentation, I have reviewed the aesthetic outcome of cleft lip and palate (CLP) surgeries prior and after NAM application.

Reference

1. Puri T, Patel D. Presurgical nasolabial molding in patients with unilateral and bilateral clefts-changing concepts and current approach. *Journal of Cleft Lip Palate and Craniofacial Anomalies*. 2015 Jul 1;2(2):98.

Category: Student: E-Poster

Theme: Cleft and Craniofacial Anomalies

Reg. Num.: 153

Anterior Palatal Fistula Closure

Dr. Durubesula Krishnaveni

Drs. Sudha and Nageswararao Siddhartha Institute of Dental

Abstract

Background

Anterior palatal fistula is a common complication following bilateral cleft palate repair. These fistulas can be repaired using different local flaps (FAMM flap, Labial random flap, buccal mucosal flap, tongue flap), redo palatoplasty with or without vomerine mucosal flap. Despite the options available, in some cases the outcome is compromised and following multiple procedures and scarring the fistulas become recalcitrant. In this poster we present a case report of recurrent anterior palatal fistula in a bilateral cleft lip and palate patient surgically corrected with premaxillary palatal flap to facilitate double layer closure. This patient had multiple attempts at fistula closure including a tongue flap and although the fistula had reduced in size, it remained symptomatic. The use of premaxillary palatal mucosa has been described in literature as an option for both, single layer closure and for double layer closure to address anterior palatal fistula. The broad premaxilla in this case prompted the surgeons to use the premaxillary mucosa for oral layer closure with neighbouring mucosa for nasal layer closure. On six weeks follow-up the results of this technique were encouraging.

Conclusion

Premaxillary palatal flap can be tried as one of the options to address anterior palatal mucosa in bilateral cleft cases. The advantage of this technique is that it can be used in younger children where tongue flaps have poor compliance. On a technical note, the surgeons should avoid using vomerine mucosa for nasal layer closure while using the premaxillary palatal mucosa.

Category: Student: E-Poster

Theme: Cleft and Craniofacial Anomalies

Reg. Num.: 177

Do the Anatomic Variations in Hemifacial Microsomia Predispose them to Potential Intraoperative Complications During Orthognathic Surgery?

Dr. Sacheth R. Ullur

Bangalore Institute of Dental Sciences

Abstract

Background

Hemifacial microsomia (HFM) is a three-dimensional (3D) congenital craniofacial disorder, characterized by hypoplasia of the first and second pharyngeal arches, which require orthognathic surgeries for the correction of the deformities. However, it remains a challenging procedure due to the inherent quality and deficient quantity of bone in HFM.

Aim

The aim of the study was to evaluate if the anatomic variations of pterygomaxillary junction (PTMJ) and ramus in HFM predispose them to potential intraoperative complications during orthognathic surgery.

Objectives

To generate a 3D model using CT, document the linear measurements of pertinent landmarks, compare them and correlate with the existing literature.

Methods

The study involved the generation of a 3D model from the CT images of HFM and class I skeletal malocclusion individuals (I). The linear measurements of the pertinent landmarks including thickness, width and height of PTMJ, length of medial and lateral pterygoid plates, and distance of lingula from superior, anterior, inferior and posterior borders along with thickness of ramus were measured and compared between the affected and non-affected sides of HFM and I.

Results

There were significant changes in the height of the PTMJ, distance of lingula from anterior, inferior and posterior borders, and thickness of ramus between the groups.

Conclusion

The thorough assessment of the anatomic variations of the deformed structures, prior to orthognathic surgery aids in reducing the incidence of undesirable complications.

References

1. Steinbacher DM, Gougoutas A, Bartlett SP. An analysis of mandibular volume in hemifacial microsomia. *Plast Reconstr Surg*. 2011 Jun;127(6):2407–2412.
2. Lee SH, Lee SH, Mori Y, Minami K, Park HS, Kwon TG. Evaluation of pterygomaxillary anatomy using computed tomography: are there any structural variations in cleft patients? *J Oral Maxillofac Surg*. 2011 Oct;69(10):2644–9.

Category: Student: E-Poster**Theme: Cleft and Craniofacial Anomalies****Reg. Num.: 435****The Versatility of Bucco-myomucosal Flap***Dr. Sanjana Kapoor**Meenakshi Ammal Dental College***Abstract**

Several flaps have been advocated for the reconstructions of defects in the oral cavity. The buccal myomucosal flap is based on buccinator muscle which is present deep in the cheek. The flap gives a pattern of dissection with consistent blood supply and makes the harvesting much easier and safer. The harvesting of the flap does not affect the donor site. Mastication and deglutition are never impaired. This myomucosal flap has been used in number of clinical situations, such as in reconstruction after tumor resection, osteomyelitis of mandible, closure of cleft palatal fistulas, primary closure of wide cleft palate, lengthening of soft palate. This myomucosal flap has abundant vascular supply from multiple interconnected pedicles. Cleft palatal fistulas are difficult to repair owing to the lack of sufficient tissue. This flap gives that bulk of tissue in order to repair the defect. In this cases series we have used the Bucco-labial myomucosal flap for the closure of anterior cleft palatal fistula post-palatoplasty surgery along with the use of Platelet rich fibrin membrane to promote good healing in the surgical site.

References

1. Closure of Palatal Fistula with Bucco-labial Myomucosal Pedicled Flap Mohamed M. EL-Leathy and Mohamed F. Attia.
2. Use of Buccal musculomucosal flap to close palatal fistulae after cleft palate repair; Nakakita, K. Maeda, S. Ando, H. ojimi, R. Utsugi.

Category: Student: E-Poster**Theme: Cleft and Craniofacial Anomalies****Reg. Num.: 450****Goldenhar Syndrome: A Rare Entity***Dr. Sakthi B. C.**Meenakshi Ammal Dental College***Abstract**

Goldenhar syndrome is a craniofacial syndrome also known as oculoauriculovertebral dysplasia or hemifacial microsomia. This syndrome is rarely inherited, its cause is still uncertain and follows an autosomal dominant pattern. Goldenhar syndrome is a condition with a prevalence ranging from 1:3500 to 1:7000 live birth, and a male-female ratio of 3:2. It usually affects the structures formed by the first

and second branchial arch the eye, ear, and spine. The severity of the abnormalities and symptoms varies by individual. Chief markers of Goldenhar syndrome are Hemifacial microsomia, Ocular dermoid cysts, Microtia or Anotia, Partial or complete deafness, Spinal abnormalities, scoliosis, kyphosis or both, Abnormal rib structure. As it affects several body systems, treatment for the condition varies and is age-dependent. The rationale behind early surgical corrections is to, improve existing asymmetry, allow for early soft-tissue expansion and stimulate further growth, improve mastication by restoring the temporomandibular joint and function, and minimize psychological trauma to the child and parents. This poster describes a case of Goldenhar Syndrome with special emphasis on oral and maxillofacial manifestations.

Category: Student: E-Poster**Theme: Cleft and Craniofacial Anomalies****Reg. Num.: 555****Presurgical Nasoalveolar Molding in Complete Cleft Lip and Palate Patient***Ms. Dr. Nupur Shukla**Sri Aurobindo Dental College***Abstract****Background**

Presurgical infant orthopaedics has been used in the treatment of cleft lip and palate patients for centuries. Early techniques focused on elastic retraction of the protruding premaxilla followed by stabilization after repair. Presurgical infant orthopaedics has been employed since 1950 as an adjunctive neonatal therapy for correction of cleft lip and palate. The nasoalveolar molding was developed by Grayson and it reduces the severity of the initial cleft alveolar and nasal deformity.

Aim

The purpose is to review the value of this technique as a part of the treatment protocol for infant born with cleft lip and palate.

Materials and Method

The electronic databases of PubMed, and Google Scholar were searched. Articles published from 2000 to 2018 were retrieved and underwent “abstract” appraisal. Following keywords were used. “Nasoalveolar Molding” “Cleft lip and palate” and “nasal stent”.

Results

Presurgical nasoalveolar, moulding can reduce the severity of initial cleft deformity, wherein the bony segments are slowly moved to more favourable position, lessening the amount of surgical correction needed to bring the lip segments together, while simplifying the surgical approach of nose.

Conclusion

By using this technique, the primary repair of lip and nose is performed under minimal tension, thereby reducing scar formation and improving the aesthetic results. Also, the frequent surgical intervention to achieve the desired results can be avoided by this technique. This technique enables surgeon to enjoy the benefits associated with repair of cleft deformity that is minimal in severity.

Category: Student: E-Poster**Theme: Cleft and Craniofacial Anomalies****Reg. Num.:** 681**Our Experience of Using Abbeys Flap For Secondary Lip Deformities: Retrospective Analysis 2012–2016***Dr. Punya Taneja**Sardar Patel Post Graduate Institute of Dental and Medical Sciences***Abstract****Introduction**

In secondary lip deformity there is imbalance in tissue volume of upper and lower lip, short columella and inadequate nasal tip which is described as whistling lip deformity. It is a procedure used in secondary repair of cleft lip where volume of upper lip is increased.

Aim

To assess outcome of Abbey's flap in correction of secondary lip deformity.

Method

This study includes patients operated for secondary lip deformity between 2016 and 19. Parameters like scarring, nasal tip projection, alar width, columellar length, vermillion show, philtrum column and lip length were assessed by non operating surgeon based on VAS (0–10). The patient's general facial appearance, over all appearance of lip and nose was evaluated by patient, patient attenders and non operating surgeon.

Results

A total of 21 cases were included in the study. An excellent aesthetic outcome was noted in relation to scarring 8.3 VAS score. Similarly observed in relation to lip length with score of 8.5. However, philtral column and nasal tip projection showed least rating in VAS (6.6 and 7.5) and subjective evaluation of general facial appearance and nose were excellent and very good for lip respectively.

Conclusion

Abbey's flap aids in functional and aesthetic reconstruction of lips which helps in lengthening of columella and in maintaining nasal symmetry with excellent surgical outcomes.

Reference

1. Kumar KM, Murthy J, Narayan N. Retrospective subjective evaluation of aesthetic outcome in secondary cleft lip deformities operated with Abbe's flap. *Int J Res Med Sci.* 2015 Jan;3:83–94.

Category: Student: E-Poster**Theme: Cleft and Craniofacial Anomalies****Reg. Num.:** 883**Anteriorly Based Tongue Flap for Reconstruction of Large Palatal-Alveolar Fistulas in a Cleft Patients***Dr. N. A. Krithika Shastry**SDM College of Dental Sciences***Abstract****Aim**

The aim of this study is to present the versatility of using tongue flap in closure of wide anterior palatal fistula, in those cases where surgical correction of cleft palate repair had previously failed.

Patients and Methods

Five cleft patients with a history of failed surgical attempt to close the anterior palatal fistula were reconstructed by anteriorly based tongue flap between Jan 2021 and Jun 2021 were included in the study. Intra-oral exploration revealed an average size of 4–6 cm diameter of anterior palatal fistula. Primary outcome measures were bleeding, wound dehiscence, necrosis, temporary loss of taste sensation. Secondary outcome measures were alterations in tongue mobility, remaining tongue shape, speech improvement, thinning of the tongue and improvement in nasal regurgitation.

Results

Age range of the patients was 4–25 years. The male to female ratio was 1:1.5. Anteriorly based tongue flap effectively closed the large fistula in all patients. After an average follow up of 3 months, showed that the nasal speech improved dramatically. The flap take up was remarkable in all five cases with minimum transient donor site morbidity.

Conclusion

In this study, anteriorly based tongue flap is versatile and are indicated when other techniques have failed and in palatal fistula measuring over 2 cm. The tongue flap can be conveniently designed based on the need to reconstruct the defect giving excellent esthetics and functional results. Due to its abundant vascularity and its low morbidity, the tongue is an excellent donor site he reconstruction of oral cavity soft tissues. However, some disadvantages are blind post op extubation, inability in swallowing and speech until the flap is depedicted and debulked, transient dysgeusia in the donor site region and in some cases the attachment of the flap can be lost due to traction.

Keywords Tongue flap, Palatal fistula, Cleft surgery, Cleft palate**Category: Student: E-Poster****Theme: Cleft and Craniofacial Anomalies****Reg. Num.:** 902**Distraction Osteogenesis versus Orthognathic Surgery in Management of Cleft Maxillary Hypoplasia: A Literature Review***Dr. Vasanthanarayanan R**Armed Forces Medical College, Pune***Abstract****Aim**

The aim of the study is to review the articles in literature comparing distraction osteogenesis and conventional orthognathic surgery in cleft maxillary hypoplasia.

Materials and Methods

A total of 2 articles were selected for this literature review after searching in PUBMED, COCHRANE and Google scholar. The

inclusion criteria, exclusion criteria and outcome measures were studies for both the study and the results were discussed.

Results

According to Adi Rachmiel et al., one stage orthognathic surgery is preferred in mild maxillary deficiency whereas distraction techniques is preferred in patients requiring moderate to large advancements with significant structural deficiencies of maxilla. According to Chua et al., it was concluded that distraction osteogenesis has no advantage over conventional orthognathic surgery for the purpose of preventing velopharyngeal incompetence and speech disturbances. Future studies should be done to compare distraction osteogenesis and orthognathic with more outcome measures and with longer follow up rates.

Conclusion

After reviewing the above articles, it can be concluded that both orthognathic surgery and distraction osteogenesis has its own advantages and disadvantages. Orthognathic surgery is a one stage procedure, and it gives immediate results compared to distraction osteogenesis which is a prolonged process and that is why orthognathic surgery is widely preferred. But, the use of distraction osteogenesis has been proved as a predictable method giving stable long term results and it can be used in patients with severe maxillary deficiency.

Category: Student: E-Poster

Theme: Cleft and Craniofacial Anomalies

Reg. Num.: 1044

Evaluation of Outcomes of Closed Primary Cheilorhinoplasty

Dr. Srinidhi K., Dr. Senthil Murugan P.

Saveetha Dental College

Abstract

Introduction

This study aims to determine the role of primary closed cheilorhinoplasty over regular cheiloplasty as a primary procedure and evaluate nasal parameters and aesthetic outcome changes.

Materials and Methods

A prospective study was conducted from January 2018 to October 2021 on ten patients. 10 Unilateral cleft lip cases with or without cleft palate were included in the study. Millard's rotation advancement flap technique for cleft lip repair and closed nasal dissection for nose by Pfeifer technique. Nasal parameters were assessed using photographs from frontal and basal view in the consecutive follow-up period of 1, 3, 6 months postoperatively regarding the dorsum of the nose, ala of nose, nostril size, sill, nasal tip, septum, and columella.

Results

Out of 10 patients, 6 were male and 4 female. Six were on the left side, and four were on the right side. The age range was of 0–3 years, with a mean age of 12.1 months. Postoperatively symmetry of both the sides was achieved and maintained for one year, which is statistically and clinically significant.

Discussion

Nasal parameters improvement can be achieved by dissection along lateral ala, releasing lateral crura, and dissection between two medial crura. Retraction of the nose tip up with skin hook after medial crura dissection helps in increasing vertical height of columella and nose. Nasal stents of 1 cm cut piece with 14 no. Foleys catheter improved

the appearance of the dorsum of the nose and reduced hematoma formation in our cases.

Conclusion

Primary cheilorhinoplasty is a better option than primary cheiloplasty for growth and development by setting nearly symmetrical growth of cartilages until final correction in teenage years to yield cosmetic and psychological results.

Category: Student: E-Poster

Theme: Cleft and Craniofacial Anomalies

Reg. Num.: 1073

Evaluation of Facial Soft Tissues and Skeletal Changes Following Anterior Maxillary Distraction

Dr. K. Sunitha

Narayana Dental College and Hospital

Abstract

Despite successful, well-timed surgery and adequate orthodontic treatment, maxillary hypoplasia appears to be unavoidable in some patients with cleft lip and palate. Traditional treatment modality in cleft maxillary hypoplasia includes Le Fort I advancement. Treatment modalities in the management of cleft maxillary hypoplasia had shifted to the distraction of the anterior maxillary segment in which tooth-borne and bone borne distractors enables both osteogenesis and histogenesis by moving the anterior maxillary segment forward with the remaining posterior maxillary segment as stable thus preventing further worsening of velopharyngeal insufficiency. Anterior maxillary distraction is a method of advancing the anterior part of the maxilla to create room for a crowded upper arch or to align an impacted canine into the arch and to improve the profile in cleft patients. This is a retrospective clinical case record study that includes 5 patients with maxillary hypoplasia who had been operated on for cleft lip and palate reported in our unit.

Category: Student: E-Poster

Theme: Cleft and Craniofacial Anomalies

Reg. Num.: 1087

Secondary Alveolar Bone Grafting in Cleft Palate Patient with Mandibular Symphysis Graft

Dr. C. Manoj Kumar, Prof. Dr. Kishore Kumar R. V.

Narayana Dental College and Hospital

Abstract

Introduction

Cleft lip and palate are the most common in the Asian population with an incidence of 1 in 500. Where 75% are unilateral cleft lip. The left

side is more commonly involved than the right side. cleft lip repair is done mostly at 3–5 months and palate repair was done at 9–18 months. To restore the function and form of both arches with proper occlusal relationship and eruption of the canine tooth in the cleft area, secondary alveolar bone grafting is done at the age of 6–9 years. Iliac cancellous bone is the Gold standard with success rate above 95%. The primary problem with this donor material is the associated pain, gait, surgical morbidity etc. This may be mitigated by the use of marrow harvesting instruments of trephines. Cranial material often has the advantage of nearby donor site, next is the Tibia followed by the mandibular symphysis graft.

Case Report

A 19 years old male patient reported to the department of Oral and maxillofacial surgery with a complaint of cleft alveolus. No significant medical history. Patient had undergone cleft repair at the age of 3 months. Cleft palate repair at the age of 16 years. On examination patient had cleft alveolus at 2,223 region. Treatment done with secondary alveolar bone grafting with graft taken from mandibular symphysis region both cancellous and cortical bone under General anesthesia. Advantage is that patient is discharged the next day without any comorbidities.

Category: Student: E-Poster

Theme: Cleft and Craniofacial Anomalies

Reg. Num.: 1091

Cleft Lip Repair Under Local Anesthesia: A Review

Dr. Muppidi Surya Mani Raj

Narayana Dental College and Hospital

Abstract

Introduction

Cleft repair is ideally performed during infancy; many authors advocate surgical intervention before the traditional age of 10 weeks. Accordingly, cleft lip repair has historically been performed under general anesthesia for patient and surgeon comfort as well as for safety concerns. However, general anesthesia itself is not without risk. Postoperative care in patients undergoing cleft lip repair can be complicated by the known risks of general anesthesia, including laryngospasm, aspiration, airway edema, and other complications resulting from undocumented medical conditions. Cleft lip repair can easily be done under local anesthesia provided the nasal deformity is not severe. Using local anesthesia can provide adequate anesthesia to perform unilateral or bilateral cleft lip repair with primary rhinoplasty in adults, as well as cleft lip and nose revisions, without the need for general anesthesia or intravenous (IV) sedation.

Materials and Method

Systemic analysis using keywords Cleft lip, Local anesthesia, Adult Cleft lip was done. Four Clinical trials and two Retrospective analysis were reviewed.

Conclusion

Cleft lip repair with local anesthesia is a useful option which improves compliance and saves time and cost without compromising quality of repair. This has been found to be particularly useful when performing cleft surgery in resource-poor settings with limited access to the equipment and/or personnel required for general anesthesia as well as in adults.

Category: Student: E-Poster

Theme: Cleft and Craniofacial Anomalies

Reg. Num.: 1199

Single Incision Technique for Two Point Fixation in the Management of Zygomaticomaxillary Complex Fractures: Clinical Case Series

Dr. Rashi Bhasin

Manipal College of Dental Sciences, Mangalore

Abstract

Background

Conventionally subciliary, subtarsal, supratarsal, infraorbital, transconjunctival and lateral eyebrow incisions are being used for two point fixation in the management of zygomaticomaxillary complex fractures.

Objective

The aim of this study is to determine the efficacy of transconjunctival approach with Y modification for the management of zygomaticomaxillary complex fractures.

Materials and Methods

Six patients with unilateral zygomaticomaxillary complex fractures were included in this study. All patients were treated by two-point fixation through single incision by the transconjunctival approach with Y modification. The average follow up period was 3 months. The adequacy of surgical exposure, aesthetic outcomes and postoperative complications were evaluated.

Results

The exposure was excellent in all patients with good aesthetic outcomes. None of the patient had any intraoperative complications. Postoperatively one patient had orbital fat herniation from lateral canthal region.

Conclusion

For management of zygomaticomaxillary complex fractures this is a relatively new technique and provides excellent exposure and good aesthetic outcome. This study is ongoing as more number of patients has to include into the study to conclude with a statistically significant result.

References

1. Martinez AY, Bradrick JP. Y modification of the transconjunctival approach for management of zygomaticomaxillary complex fractures: a technical note. *J Oral Maxillofac Surg.* 2012.
2. K. Rajkumar, P. Mukhopadhyay, Ramen Sinha, T. K. Bandyopadhyay. 'Y' Modification of the Transconjunctival Approach for Management of Zygomatic Complex Fractures: A Prospective Analysis. *J Oral Maxillofac Surg.* 2015.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 138****Transconjunctival versus Subciliary Approach for the Reconstruction of Orbital Floor Fracture***Dr. Soumya Kanti Roy**Institute of Dental Sciences***Abstract
Background**

Trauma to the orbit has grave functional plus aesthetic implications. Surgical management of orbital fractures even today generates debate amongst the maxillofacial surgery society regarding the choice of surgical approach, and management techniques.

Purpose

The aim of this study was to evaluate and compare two surgical approaches for orbital floor fractures, namely the preseptal transconjunctival and the subciliary skin-muscle flap approach.

Patients and Methods

Twenty patients with infraorbital rim and floor fractures, were randomly split into two groups with each group comprising 10 patients each. In the first group, preseptal transconjunctival was used for anatomic reduction, fixation and reconstruction of the orbital floor where required. In the second group, subciliary skin-muscle flap approach was used for the same.

Results

In transconjunctival group, 1 case (10%) had transient entropion, whereas in subciliary group, transient ectropion was seen in 1 case (10%).

Conclusion

In this study, both the preseptal transconjunctival approach as well as subciliary skin-muscle flap approach for the open reduction rigid fixation and reconstruction of infraorbital floor and rim fractures are equally efficacious with satisfactory outcome and minimal complications.

Keywords Preseptal transconjunctival approach, Subciliary approach skin-muscle flap, Infraorbital floor and rim fractures.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 194****Endoscopic Assisted Subcondylar Fracture Management***Dr. Anup Kumar Singh**Armed Forces Medical College***Abstract**

Open reduction and internal fixation (ORIF) using an extraoral approach has certain benefits over the nonsurgical treatment. Risk of

damage to the facial nerve and an extraoral scar remains constant disadvantages. An endoscopic-assisted ORIF offers an intraoral approach, thus eliminating consequences such as scarring. Though this technique offers unparalleled advantages. Surgical results improve only with patience and experience. Patients treated with endoscopic-assisted ORIF are evaluated for functional outcomes that included occlusion, maximal interincisal opening, and deviation of mouth and complications such as facial nerve paresthesia, post-surgical infection. Endoscopic-assisted ORIF has a definite scope in management of condylar fractures. Results are more predictable with appropriate case selection due to a steep learning curve and intraoperative technical challenges. An initial experience in ORIF using extraoral approaches would greatly benefit a surgeon in utilizing this novel and alternate tool.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 246****Bimodal Approach: A Key to Manage a Case of Traumatic Superior Orbital Fissure Syndrome***Dr. Komal Sampat Navalkha**DY Patil Dental College and Hospital***Abstract**

An unusual complication associated with maxillofacial trauma is the superior orbital fissure syndrome. Trauma related superior orbital fissure syndrome often presents within 48 h of injury, but presentation can be delayed by several days. It may be the result of fractures of the Le Fort II and III type as well as fractures of the zygomaticomaxillary complex. The commonly encountered clinical features are: (a) ptosis of the upper eyelid, (b) complete immobility of the eye and slight exophthalmos, (c) paralysis of the pupillary and ciliary muscles resulting in dilated fixed pupil and accommodation paralysis, (d) anesthesia in the area of distribution of all branches of the first division of the trigeminal nerve supplying the cornea, upper eyelid, bridge of the nose and forehead. The rationale behind the treatment of SOFS of traumatic origin lies primarily in minimizing further irreparable damage to the neuronal structures. Benefits of corticosteroids in traumatic optic neuropathy in the early 1980s have been reported therefore application of high-dose corticosteroid treatment in optic nerve injury has increased considerably. The purpose of this poster is to share our quandary of a case which showed signs of an orbital apex syndrome but was finally diagnosed as an superior orbital fissure syndrome and managed surgically along with megadose steroid therapy.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 248****3D Plating in Mandibular Angle Fractures***Dr. Damini Gupta**D. Y. Patil School of Dentistry, Navi Mumbai***Abstract**

Mandibular fractures are among the most frequently encountered type of facial injury because of its prominence. Angle fractures accounts 20–30% of all mandibular fractures. It can occur with other facial fractures and most common associated fracture with angle is contralateral parasymphysis. Champy et al. proposed miniplate osteosynthesis on superior border at external oblique line. For immediate mobilization of jaws two miniplate fixation is postulated by Ellis and Karas in 1992. Farmand developed concept of 3D plating in 1992. Main aim of our study is to evaluate clinical outcome of mandibular angle fractures using 3D Rectangular plate with locking screws in angle fractures through extraoral approach. Age group of 15–70 years with or without associated facial fractures along mandibular angle fractures included. Patients of age greater than 70 years and less than 15 years and comminuted fractures are excluded. Sample of 10 patients are included in our study. One Titanium Rectangular plate of 2 mm thickness with 6 locking screws of 2 × 6 mm used in mandibular angle fractures. Patients are followed clinically and radiologically at regular postoperative follow up. The parameters assessed are reduction of fracture segments, postoperative mouth opening and complications. In all cases the fracture reduction is 100%, no postoperative wound infection and hardware failure. Four patients had paraesthesia but gained sensation by the end of 3 months postoperatively. The results of our study is a feasible alternative to conventional miniplate systems with good clinical outcome and advantage of three dimensional stability.

Keywords 3D Plating, Mandibular angle fracture**Category: Student: E-Poster****Theme: Craniomaxillofacial Trauma****Reg. Num.: 264****Comparative Evaluation of Different Osteosynthesis Modalities with Respect to Lingual Splaying in Mandibular Intra-Foraminal Fractures Using CBCT: A Prospective Study***Dr. Thota Avinash**Mamata Dental College***Abstract**

In any ORIF, we achieve anatomic reduction of the buccal bone fragments and placement of the hardware with proper inter-occlusion

relation. But lateral muscular forces cause widening of the mandible by splaying the angles outward and creating a defect on the lingual aspect of the anterior-most fracture. This discrepancy becomes cumulative, because the upper facial skeleton is built upon a widened mandible which leads to unesthetic widening of the face post-operatively. The study was conducted to evaluate the efficacy of various techniques of osteosynthesis in reducing the lingual splaying in mandibular inter-foraminal fractures using CBCT. A study was conducted involving lag screws, 3-D plates and standard miniplates in 30 patients where the reducing of lingual splay was evaluated using CBCT both pre and post operatively. Apart from that, other factors like stability of occlusion and return to normal function were also evaluated at various time intervals. The outcome after statistical processes indicated that 3-d plates provide best results in terms of reduction of lingual splaying as well as anatomic and functional outcomes.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 267****Maxillofacial Injuries Due to Domestic Violence: A Retrospective Study***Dr. Jhilik Biswas**Institute of Dental Studies and Technology, Modinagar***Abstract****Background**

Domestic violence is one of the commonest factor related to maxillofacial injuries after trauma, mainly related to women abused at home and men facing the same under other circumstances. Violence includes physical, sexual, financial, emotional or psychological abuse.

Research Objective

To study the patterns and frequency of maxillofacial injuries due to violence.

Methods

A retrospective study was conducted using electronic data records from tertiary care centre, from period between 2015 and 2021. Details of gender, nature and area of maxillofacial injury and mechanism of injury was recorded.

Results

According to the records, 278 number of patients suffered from maxillofacial injuries due to other reasons while due to violence, 21 number of patients suffered. Violence experienced by these patients was most commonly due to punch injuries and left side of face and middle third was most commonly involved followed by angle of mandible. Females showed a greater predominance in number of cases compared to males. Number of females affected were 19 and only 2 males. Commonest injuries involved soft tissue and while fractures had less predominance.

Conclusion

A fraction of victims of domestic violence, sustained maxillofacial injury where midface area and left side of the face was most commonly involved. Females showed a greater frequency in number of cases.

References

1. Maxillofacial injuries associated with domestic violence: experience at a major trauma centre. Boyes. H et al. British Journal of Oral and Maxillofacial Surgery 58 (2020) 185–189.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 284****Malunited Condyle: An Insight to Conservative versus Surgical Approach***Dr. Shreyans Ravindra Sanaki, Dr. Aditya Iyengar**Sri Rajivgandhi College of Dental Sciences, Bangalore***Abstract**

Malunion occurs when healing does occur but results in improper alignment of healed bony segments. It may not be clinically significant unless it causes facial asymmetry or involves teeth resulting in malocclusion. Time for surgical intervention is an often-investigated potentially modifiable risk factor for complications after a condylar fracture. Traditionally, mandibular condylar fractures with malocclusion and/or facial asymmetry have been managed with closed reduction as this can often achieve normal occlusion. Following trauma, the condylar head can undergo aseptic necrosis and resorption resulting in a bifid deformity, and osteoarthritis and ankylosis of the TMJ can occur. This is often a dynamic process that stabilizes after 6 months. Condylar reconstruction aims to correct condylar movements to produce normal incisal opening, lateral excursion, and protrusion to achieve functional occlusion and restore facial symmetry by maintaining ramus-condylar height, prominence of angle, and midline chin symmetry. Early identification of malunion and malocclusion before 6 months while there is still good mandibular mobility and before late complications have set in, will allow for better outcomes with less invasive interventions. The ultimate goal is to restore function and occlusion, in a pain-free manner, as close to the pre-injury architecture as possible.

Reference

1. A K, HL S, Management of Non-union and Malunion After Primary Mandibular Condyle Fracture Treatment: A Review and Recommendations, Journal of Oral and Maxillofacial Surgery (2020). <https://doi.org/10.1016/j.joms.2020.05.043>

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 321****Patterns of Facial Injuries in North Bangalore: A Retrospective Study***Dr. K. R. G. Aravind Kumar**Bapuji Dental College and Hospital***Abstract****Background**

In Bangalore, the rate of face trauma has been continuously rising. Despite the fact that Bangalore has over 100 oral and maxillofacial surgeons, many patients go untreated. These studies aid in the study of face trauma's aetiology, severity, and distribution.

Research Aims and Objectives

The aim of this study was to look at the epidemiology of facial injuries in a tertiary care centre in Bangalore.

Methods

Patients reporting to a tertiary care center's outpatient department of oral and maxillofacial surgery, as well as those hospitalised between October 2015 and November 2021, were accessible. Data on the epidemiological features of face injuries were entered into a proforma created specifically for the study.

Results

The study found that road traffic accidents caused 72.24% of the cases, with men being more afflicted and the 21–30 year old age group being the most commonly affected by face injuries. The most severely injured area was mandible.

Conclusion

Creation of a national database incorporating government and private dental colleges, general practitioners, consultants, and hospitals will go a long way towards solving the concerns of maxillofacial trauma prevention and treatment.

Keywords Facial injuries, Mandible, Road traffic accident (RTA), Open reduction and internal fixation

References

1. Ellis E, Moos KF, El-Attar A. Ten years of mandibular fractures: An Analysis of 2137 patients. J Oral Surg 1985; 59(2): 120–129.
2. Kerim O, Yilmaz G, Sinan AY, Bayar. An analysis of maxillofacial fractures: A 5 yr survey of 157 patients. Military Med 2004 Sep; 169(9): 723–7.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 348****Screw Retained Erich Arch Bar for Maxillo-Mandibular Fixation***Dr. Uddipta Chattopadhyay, Dr. Aditya Iyengar*

Sri Rajiv Gandhi College of Dental Sciences And Hospital

Abstract

Background

Intermaxillary fixation is regarded as a significant step in the management of maxillofacial trauma. Various techniques have been mentioned in the literature for achieving maxillomandibular fixation. The conventional methods such as arch bars and eyelet wiring are the most commonly used, but these methods have their own shortcomings. IMF using intraoral modified screw retained arch bar has been introduced for the treatment of mandibular fractures.

Aim

To evaluate the efficacy of screw retained arch bar for both maxillary and mandibular fracture.

Materials and Methods

In this study we included 20 patients with maxillary and mandibular fracture were taken and compared with Conventional Erich Arch bar. Patient were followed up for 7, 14, 40 days using following parameters, time taken, iatrogenic injury to the teeth and periodontium and stability of the arch bar.

Result

We have encountered iatrogenic tooth injury in 2 patient, SRAB shows beneficial in terms of time and stability compared to conventional Erich arch bar.

Conclusion

Use of screw retained erich arch bar for intermaxillary fixation is a valid alternative to conventional method in the treatment of maxillary and mandibular fractures.

References

1. Pathak P, Thomas S, Bhargava D, Beena S. A prospective comparative clinical study on modified screw retained arch bar (and conventional Erich's arch bar. Oral and maxillofacial surgery. 2019 Sep;23(3):285–9.
2. Rothe TM, Kumar P, Shah N, Shah R, Kumar A, Das D. Evaluation of efficacy of IMF fixation screws versus modified arch bar for IMF National journal of maxillofacial surgery. 2018 Jul;9(2):134.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 354

Treatment of Orbital Floor Fracture with Titanium Mesh Placement

Dr. Raj Trivedi, Dr. Shailesh Menat

Narsinhbhai Patel Dental College and Hospital, Visnagar

Abstract

Patient reported to the emergency room in Sree Balaji Medical College and Hospital, Chennai, with a history of alleged self skid and fall from two wheeler. first aid was given. patient was stabilized and handed over to department of Oral and Maxillofacial Surgery. difficulty in extra-ocular movement was seen in the left eye. patient was advised to undergo 3D CT facial bones. CT scan showed left floor of orbit fracture with entrapment of the medial rectus muscle. patient

was advised to undergo ORIF under GA with titanium mesh placement. all pre-operative investigations were done. pre-anesthetic clearance was completed. Patient was assessed to ne ASA II. written and informed consent was taken. intra-operatively, GA was administered, infraorbital approach was taken, medial rectus muscle was freed and floor reconstruction was done with titanium mesh and 4 titanium 2 × 6 mm screws. closure was done. patient was discharged after 2 days. patient was reassessed after 1 week and again after 1 month. 1 week post-operative PNS view X-ray was taken. implant was intact with no evidence of migration or inflammatory reaction. extra-ocular movement was restored. sutures were removed at 1 week post-operatively.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 357

Historical Evolution of Surgical Approaches to the Midface: A Literature Review

Dr. Tamoghna Jana

Sree Balaji Dental College and Hospital

Abstract

Introduction

Techniques used to approach the maxillofacial complex have been recorded through the course of history and have evolved over time. Egyptian physicians were among the first to treat facial fractures and facial wounds about 4700 years ago. Currently, there are a plethora of approaches that are routinely used to gain access to the midface. Each of them has advantages and disadvantages depending on the goals of the surgery. These techniques are the subject of many text and articles; but how and why were they developed? Under what circumstances were they designed? While most texts ignore the historical aspects of a surgical approach, an attempt is made to provide that background for the most widely used approaches to the midface.

Methods

Literature searched from Pubmed, web of sciences, scopus, elsevier, springer, blackwell, medline and Google. Displayed few cases with some of the old and new approaches mentioned in the literature with follow up.

Conclusion

The proper understanding of the historical background of the surgical approaches to the face provides us a guidance in developing surgical skills and to innovate new approaches in future.

References

1. Sifuentes-Cervantes JS et al. Historical evolution of surgical approaches to the face-part II: midface [2021 Jun 29]. Oral Maxillofac Surg. 2021. <https://doi.org/10.1007/s10006-021-00956-w>
2. Laskin DM (2016) Oral and maxillofacial surgery: the mystery behind the history. J Oral Maxillofac Surg Med Pathol 28:101–104.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.:** 377**Health Related Quality of Life in Patients Surgically Treated for Orbital Fractures: A Quantitative Study***Dr. Syed Vikharuddin**Teerthankar Mahaveer Dental College and Reserch Centre***Abstract****Introduction**

Orbital trauma is relatively common in patients with facial trauma. Orbital trauma can cause esthetic and functional defects as well as psychological and social trauma which have a great impact on the quality of life of the patients. Patients with orbital fractures confront many potential problems that affect their quality of life such as visual disturbances, sensory disturbances, changes in facial appearance, prolonged facial pain, anxiety, depression and interruptions in social and professional life. Moreover, patients with orbital trauma show low life satisfaction, alcoholism, marital conflicts and deficits in occupational functions.

Aims and Objectives

The aim of this study is to evaluate patients' health related quality of life (HRQoL) before and after surgical treatment of orbital fractures.

Methods

This quantitative study comprises of adult patients who underwent treatment and surgical reconstruction of orbital fractures from 2019 to 2021 at SDM College of Dental Sciences and Hospital. The ethical approval was obtained from ethical committee board and written informed consent was obtained from all participants. The HRQoL was evaluated preoperatively and post operatively with the aid of the standardized 15D instrument. The single index 15D scores have range 0–1 with 1 representing full health and 0 being equivalent to dead. The 15D HRQoL scores was analysed and statistically verified.

Results

The results of the study are under statistical evaluation and should be considered as a first step in research in this direction on HRQoL in trauma patients.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.:** 465**A Study of Titanium Mesh versus Medpor Implant in Orbital RIM and Floor Fractures***Dr. Priyam Mitra**SDM Dental College and Hospital***Abstract**

Presentation Type: E Poster

Name of Presenter: Dr. Vishakha Gunjal, 3rd year PG

Bharati Vidyapeeth Dental College and Hospital Sangli

Aim

To determine the efficiency of titanium mesh and titanium mesh with Medpor implant in treatment of Orbital floor and rim fracture.

Introduction

Orbital floor and inferior rim are most commonly involved fractures in midface. These injuries can lead to various functional and aesthetic complications on a later date, such as enophthalmos, extraocular movement impairment, and diplopia. Diagnosing these types of trauma was difficult in the past with plain radiographs, thus the diagnosis rate was low. With the development of new diagnostic modalities, it is now relatively easy to diagnose and confirm orbital wall and floor fractures. Thus, orbital reconstruction has become a relatively easier procedure in Maxillofacial surgery. In this poster we will discuss our study conducted in patients to compare efficiency of Medpor implant with respect to titanium implant orbital floor and rim fractures.

References

1. Marcin Kozakiewicz and Piotr Szymor: "Comparison of pre-bent titanium mesh versus polyethylene implants in patient specific orbital reconstructions" *Head and Face Medicine*, volume 9, 2013, Article no. 32.
2. Michelle Y. Peng, Shannath L. Merbs, Michael P. Grant, Nicholas R. Mahoney: "Orbital fracture repair outcomes with preformed titanium mesh implants and comparison to porous polyethylene coated titanium sheets." *Journal of cranio-Maxillofacial Surgery*, Volume 45, Issue 12, December 2017, Pages 1944–1947.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.:** 511**Use of Drill Free Screws and Self-tapping Screws in the Treatment of Midface Fractures: A Comparative Evaluation***Dr. Gunjal Vishakha Sanjay**Bharti Vidyapeeth Deemed To Be Dental***Abstract****Introduction**

ORIF is accepted as a standard treatment modality in midface fracture. Commonly titanium miniplate with screws are used. Screws plays a pivotal role as stability of fractured segment depend on good contact between screw threads and bone. Two types of screws are used; self-tapping screws (STS) and self-drilling screws (SDS). STS requires a preliminary pilot hole through which it is inserted and with tightening they tap their groove and is fixed. SDS simply pressed with pressure and with tightening tap their groove. STS is common in practice though thermal necrosis; screw loosening is not uncommon. Similarly, though there is better bone screw interface, less chance of thermal necrosis, less gadget requirement less aerosol production it is

still not common in practice. We have assumed that DFS would be a better choice particularly in mid face since bone is soft and fragile.

Methodology

We conducted a prospective comparative study in treating midface fracture with two groups using STS and SDS. Primarily healing criteria is compared and also the ease of placement, time of placement, fracture stability status of occlusion teeth vitality infection evaluated with statistical analysis.

Result

No significant difference in healing criteria found. Ease and reduced fixation time found in DFS.

Discussion

DFS facilitate better ease of fixation, with reduced fixation time in accessible area but difficult in inaccessible area, other factors, though support the hypothesis require larger sample size.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 515

Patient Specific Implants: A Tailored Perfection

Dr. Bikash Ranjan Acharya

S. C. B. Dental College Cuttack

Abstract

Introduction

Facial deformities are of major concern in facial aesthetics and will require a definitive solution. With advent of High resolution 3D Computed Tomography combined with various planning software it has strongly facilitated more precise and specific amendment of surgery. Patient specific implants (PSI) represents the ideal option to reconstruct high complexity craniofacial defects for its safety, reproducibility and high accuracy. Recently, the development of computer-aided surgical simulation (CASS) has enabled clinicians to use the best available data for evidence-based diagnosis, treatment planning, and execution of treatment.

Objectives

To highlight patient specific implants which were used for patients at our institute. The purpose is to describe the workflow from imaging, via virtual design, to manufacturing of patient-specific titanium reconstruction plates, cutting guide and mesh.

Materials and Methods

A case series carried out from Jan 2021 to July 2021. Two patients with Facial deformity were treated. Both the patients underwent computer assisted surgical simulation (CASS), planning and patient specific implants made for the reconstruction of the deformity.

Results

Will be presented.

Conclusion

All relevant clinical evidences will be discussed in the poster.

References

1. Per Dérand, Lars-Erik Rännar; Imaging, Virtual Planning, Design, and Production of Patient-Specific Implants and Clinical Validation in Craniomaxillofacial Surgery; Craniomaxillofacial Trauma and Reconstruction (Sept 2012).

2. B. Mejía, B. Méndez; Facial reconstruction: patient specific implants, success and failure. Int Journal of Oral and Maxillofacial Surgery (2017).

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 528

Mayday Mayday Mayday: A Hook over the Carotid

Dr. Shruti Iyer

SRM Kattankulathur Dental College and Hospital

Abstract

Presenter: Dr. Sunny Kumar Singh Sikarwar, Dr. Sruthi Rao.

Penetrating neck injury is a relatively uncommon trauma. The immediate and long-term consequences of injury to the neck can be significant because of close relationship of important anatomical structure in a confined space. Vascular injury in penetrating neck trauma predicts a poorer outcome and usually requires surgical neck exploration. Recent improvements in imaging modalities have altered the way in which the neck injuries are best approached with a more conservative stance. My poster shows the case of a zone 3 penetrating neck injury abutting the external carotid artery treated by team of surgeons comprising of oral and maxillofacial surgeon, neurosurgeon, cardiovascular surgeon, ENT surgeon and anesthetist. We have used mandibulotomy approach for visualizing and extraction of the foreign body.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 578

Efficacy of Delta Plates and Miniplates in Subcondylar Fractures of Mandible

Dr. Sunny Kumar Singh Sikarwar, Dr. Sruthi Rao

Rungta College of Dental Science and Research

Abstract

Background

Face is the window through which we perceive the world around us and the world perceive us, therefore any injury to this region requires immediate attention and treatment. The prominent and exposed position of the head in relation to the body is the reason why the facial skeleton is more prone to injuries in any traumatic events.

Aims/Objectives

The aims and objectives of this study is to compare the efficacy of delta plates and double miniplates in the treatment of subcondylar fractures of mandible.

Methods

Twenty patients with mandibular subcondylar fractures were included in the study. Patients were randomly divided in two groups. Group A was treated with Delta plate, Group B with double miniplates. All patients were evaluated and followed up for 6 months. Operating time was noted and incidence of pain, infection, occlusion, mobility, wound dehiscence, neurosensory deficit and mouth opening were prospectively evaluated.

Results

Primary bone healing was achieved in 100% cases. The working time for fixation of delta plate is statistically less than other study group, no incidence of mobility, infection or wound dehiscence was noted in any groups.

Conclusion

Except the working time there was no difference noted in the other parameters, the delta plate fulfills the principles of functional and stable osteosynthesis similar to that of two miniplates. Both are able to resist physiological strains but delta plate has the added advantage of smaller size combined with greater stiffness of the plates and finally neutralization of changing strains at the anterior, lateral and posterior borders.

References

1. Gupta M, Iyer N, Das D, Nagaraj J. Analysis of different protocols for fracture of condylar process of mandible. *J Oral Maxillofac Surg* 2012; 70:83–91.
2. Sikora M, Sielski M, Stapor A, Chlubek D. Use of the delta plate for surgical treatment of patients with condylar fractures. *J Cranio Maxillofac Surg* 2016.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 638****Traumatic Optic Neuropathy***Dr. Aratrika Banerjee**Mr. Ambedkar College of Dental Sciences and Hospital Bangalore***Abstract****Introduction**

Visual loss after direct optic nerve injury is understandable. Visual impairment leading to visual loss following indirect trauma to optic nerve in blunt trauma is devastating and often overlooked.

History and Incidence

In 1879, Berlin noted that trauma could lead to fracture of optic canal: Incidence—0.32–9%, 0.5–5% of patients with closed head injuries,—2.5% of those with mid-facial fractures. The incidence of optic canal fracture in traumatic blindness has been reported as 6–92%.

Etiology of Tron

- Blow to ipsilateral brow or forehead.
- Zygomatic orbital complex fracture.
- Lateral orbital wall fracture.

- Blunt skull trauma.
- Lefort II and III.

Diagnosis

- Careful history.
- Vision, Finger counting, Light perception.
- Colour saturation.
- Pupils-size, RAPD.
- Visual fields.
- Fundus examination.
- Ocular motility.

Management

- Observe.
- Medical-Steroids.
- Surgery.
- Surgery and Steroids.

Conclusion

With rise in incidence of orbital fractures due to high velocity accidents, it is imperative for the maxillofacial surgeons to be aware of such severe complications like visual impairment and blindness which may stand a chance of recovery if identified and treated early.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 650****NOE Fracture***Dr. Parul Goyal**Government Dental College and Hospital, Aurangabad***Abstract**

The bony naso-orbital-ethmoid complex is a 3 dimensional delicate anatomical structure. Damages to this region may result in severe facial dysfunction and malformation. The management and optimal surgical treatment strategies of NOE fractures remain controversial. For a patient with NOE fracture doctors should perform comprehensive clinical examination and radiographic analysis to assess the type and extent of fracture. The result of assessment will assist doctors to make patient specific program for the sake of reducing post operation complications and restoring normal appearance and function as much as possible. This poster focuses on the advancement of management of NOE fractures including symptoms, classification, diagnosis, approaches, treatment and new technique in the field.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 691****Aesthetic Outcomes Following Secondary Deformity Correction of NASO-Orbito-Ethmoid (NOE) Fractures***Dr. Darshi Jain**DY Patil Dental College and Hospital***Abstract****Background**

Satisfactory restoration of the medial canthal ligament attachment, and repositioning of fractured segment aims to restore the inter-canthal distance and nasal projection in patients presenting with secondary deformities following NOE fractures.

Aim

To assess the improvement of medial canthal aesthetics and dorsal projection of the nose in secondary deformity correction of NOE fractures.

Methods

A cross-sectional observational study that included patients with post-traumatic secondary deformity of the NOE region from April 2020 to September 2021 was done. The primary outcome measures—fronto-nasal angle (FNA), degree of superior repositioning of the radix and improvement of the frontal and lateral profile following surgery were objectively analyzed by three independent investigators. Descriptive and analytical statistics were performed.

Results

Six patients (mean age = 30.5 years) with secondary deformity of the NOE region were recruited. The Wilcoxon signed rank test that was used to compare means for the pre- and post-FNA values showed a post-surgical reduction of 12.57 degrees ($p = 0.027$). Sample *t*-test revealed a statistically significant 39.33% improvement in the vertical positioning of the radix ($p = 0.001$). The post-treatment outcome scores for frontal and profile esthetics had a mean of 3.28 and 3.5 respectively and did not reveal any significant differences between the investigators ($p = 0.533$). The Fleiss Kappa test for inter-rater reliability revealed moderate strength of agreement between the investigators (kappa value = 0.418, $p = 0.032$).

Conclusion

All the patients demonstrated improved nasal and medial canthal aesthetics in frontal and profile view. Dorsal augmentation complements medial canthal aesthetics in secondary deformity correction of NOE fractures.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 696****Fixation of Zygomatic Arch Fractures with Transbuccal Approach: A Clinical Trial***Dr. Manjusha A.**Meenakshi Ammal Dental College and Hospital***Abstract****Background**

The facial projection and width is maintained by the zygomatic arch. In certain clinical scenarios, restoration of its form is done by open reduction and internal fixation (ORIF). The current approaches come with its associated complications.

Aim**Methodology**

An observational study was conducted to evaluate intraoral reduction and transbuccal fixation of zygomatic arch fractures. Six patients with zygomatic arch fracture were recruited in the study. During the pre and post-operative period clinical parameters such as pain, swelling, mouth opening facial nerve function and scar were evaluated. Radiographic evaluation was carried out to analyse the Displacement and inter-fragmentary separation on computed tomography (CT) images.

Results

In the post-operative period, mouth opening improved while swelling and pain decreased by day-7 in all the patients (statistically significant). No facial nerve injury or scar formation was observed in our study. The CT analysis revealed a satisfactory outcome with respect to inter-fragmentary separation.

Conclusion

Intraoral open reduction and transbuccal fixation is efficient and less invasive technique to address zygomatic arch fractures.

References

1. Giudice A, Cristofaro MG, De Cicco D, Barca I, Orabona GD, Califano L. Percutaneous reduction of isolated zygomatic arch fractures: a 5-year experience.
2. Panneerselvam E, Balasubramanian S, Kempuraj J, Babu VR, Raja VK. Management of Zygomatic Arch Fractures by Intraoral Open Reduction and Transbuccal Fixation: A Technical Note.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 792****Management of Maxillofacial Trauma During Global Pandemic-Covid 19: Our Methods Overcoming the Disastrous Times***Dr. Nidhi Hari**SRM Dental College***Abstract
Introduction**

Entire world has been facing the challenging times of the pandemic and new ways has evolved over a period of time and based on the needs. This article briefs up our methods of treatment during COVID 19 times and how we have helped numerous patients with limited resources available.

Aim

To assess new methods of treating Maxillofacial trauma during COVID 19.

Method

In our center we have treated a total of 78 patients over a period of 5 months starting from June 2020 to November 2020 which included 34 mandibular fractures, 22 maxillary fractures, 10 dento-alveolar fractures. Operating surgeons were provided with PPE and face shields. All procedures were treated under local anaesthesia containing lignocaine and adrenaline (1:80,000) long standing procedures lasting more than 2 h were treated with bupivacaine local anaesthesia. Surgical operation theatres were treated with 40% formaldehyde. Post operatively all patients were given 3 days of injectable antibiotics and recovered uneventfully.

Results

A total of 78 patients over a period of 5 months starting from June 2020 to November 2020 which included 34 mandibular fractures, 22 maxillary fractures and 10 dento-alveolar fractures were treated. An excellent outcome was noted in prognosis with our evolved method of treating maxillofacial trauma during pandemic time.

Conclusion

Our evolved method of treating maxillofacial trauma aids in excellent surgical outcome while maintaining safety of clinician and patient.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 869****Various Management Modalities and Radiographic Outcomes of Condylar Fractures: A Single Centric Retrospective Study***Dr. Yashas N. Raj**SDM College of Dental Sciences and Hospital***Abstract****Background**

The mandibular condylar fracture is third most frequent maxillofacial fracture but still the management remains controversial.

Aim

The purpose of the study is to brief types of management modalities of various condylar fractures and their radiographic outcome at Saraswati Dental College and Hospital in last 3 years (January 2018–December 2020).

Materials and Methods

Total 17 numbers of patients have been included in this retrospective study among them 11 male (65%) and 6 female (35%). It included 12 unilateral condylar fractures (70%) and 5 bilateral condylar fractures (30%) which anatomically classified as 13 condylar neck fractures (59%) and 9 subcondylar fractures (41%). Depending on the anatomic position, type, displacement and associated fractures, 5 closed reduction (23%) and 17 ORIFs (77%) were done. Open reduction fixed with lag screw in 1 patient, 3-D strut plate in 2 patients and single miniplates fixations in 14 patients. Orthopantomograms were analyzed pre-operatively, immediate post-operatively, after 1 month, 3 month, 6 month to evaluate the radiographic changes.

Results

Pre-operatively the average ramus height is 62.07 ± 4.13 (in mm) and condylar angulation is 18.23 ± 4.38 (in degree) while immediate post operatively 66.98 ± 5.03 (in mm) and angulation 25.67 ± 4.07 (in degree) respectively. After 6 months the value was 66.43 ± 4.97 (in mm) and 25.24 ± 3.94 (in degree) which is statically significant ($p < 0.5$).

Conclusion

Open reduction and internal fixation with ORIFs allows better maintenance in function and anatomical repositioning of condyle as compared to closed reduction.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 878****Orif in Pediatric Mandibular Fracture***Dr. Barsarani Panda**Saraswati Dental College and Hospital***Abstract**

Pediatric mandibular fractures are less common than in adults. Mandibular fractures in children are less due to protective anatomy in them. Management of pediatric fracture vary from conservative management with acrylic splint and arch bar fixation to surgical exposure of the fracture site with internal fixation. Special consideration is needed in children for the interferences of the growth and developing tooth buds while going for the surgical management. The hardware for internal fixation can be made up of either titanium or bioresorbable material. This poster presents a case where a pediatric patient with extensive mandibular fractures and facial lacerations was managed with emergency tracheostomy and open reduction with internal fixation. Owing to the emergency situation and financial condition of parents, ORIF was done with titanium mini plates.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 881****Comparison of the MSS and SBSES in the Assessment of Scars Left by Maxillofacial Incisions***Dr. Richa**King George's Medical University***Abstract****Background**

In trauma cases, maxillofacial surgeons use incisions to gain access to the surgical site, which may cause scarring of the region. The Manchester Scar Scale (MSS) and the Stony Brook Scar Evaluation Scale (SBSES) are two scar assessment scales, which use the Visual Analogue Scale (VAS) criteria along with their own unique variables.

Research Aims and Objectives

To compare the MSS and the SBSES in their assessment of scars left by maxillofacial incisions.

Methods

The scars of 140 patients with a history of operation involving a maxillofacial incision were evaluated, 6–12 months after the procedure. Judgement was made using both scales, whether scar revision surgery was required. The data was tabulated, and statistical analysis was performed.

Results

Out of the 140 patients included in the study, the MSS stated that 5 of the cases required scar revision for adequate aesthetics. The MSS can be used for a wider range of scars as it assesses the surrounding tissue. The SBSES is specifically used for the short-term assessment of repaired injuries.

Conclusion

The MSS is superior to the SBSES in the assessment of scars for the requirement of scar revision surgery, as the MSS takes the surrounding tissue into consideration. The SBSES is used only for short-term assessment and is less reliable for the appraisal of scar revision surgery.

References

1. Fearmonti R, Bond J, Erdmann D, Levinson H. A review of scar scales and scar measuring devices. *Eplasty*. 2010;10:e43. Published 2010 Jun 21.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 914****Transparotid and Transmassetric Anteroparotid Approach for Treatment of Subcondylar Fractures***Dr. Aditya Iyengar, Dr. Shreyans Ravindra Sanaki**Sri Rajiv Gandhi College of Dental Sciences***Abstract**

Fractures of the mandibular condylar process is one of the most common occurring mandibular fractures, representing 17.5–52% of all mandibular fractures. Surgical access to the sub condylar region requires technical skill and a thorough knowledge of anatomy of the area. The common approaches for treatment of subcondylar fractures are submandibular, preauricular, retroauricular, retromandibular transparotid and transmassetric anteroparotid approaches. However, the complications of these approaches are visible scars, sialoceles, frey's syndrome and salivary fistulas and the risk of injury to the facial nerve, great auricular nerve, and auriculotemporal nerves. Transparotid and transmassetric anteroparotid approach has advantages that include a short distance from the skin incision to the condylar fractures, hidden scars, adequate surgical exposure and it is associated with a relatively-low incidence of facial nerve injury (FNI). For subcondylar fractures, a transmassetric anteroparotid approach with retromandibular and preauricular extension is the safest approach to decrease risk of FNI compared to transparotid approach with less complication rates. This poster depicts the transparotid approach and transmassetric anteroparotid approach for subcondylar fractures and indications for the selection of the incision, technique, complications of each approach.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 922****Condylar Fracture: Open versus Closed: Our Experience***Dr. Prachi Sharad Deore**Terna Dental College***Abstract****Introduction**

Mandibular condyle fractures are distinctive among maxillofacial injuries in that they disrupt mandibular function in a way that other traumatic injuries do not. Condylar fractures can be treated using either the conservative (closed reduction and immobilisation) or surgical (open reduction and internal fixation) approaches. Both of these modalities of treatment have advantages and disadvantages, as well as indications and contraindications. The goal of this study was to compare the results of surgical versus conservative treatment of condylar fractures.

Methodology

48 of patients with moderately displaced isolated condylar fractures and > 18 years of age were randomly divided into nonsurgical and surgical group based on Edward Ellies criteria. This study compared the two groups based on seven parameters, mouth opening, lateral movements, occlusion, deviation of mandible, temporomandibular disorders and pain which were measured pre- and post-operatively. Follow-up period was for 6 weeks.

Results

The *p* value ($p > 0.05$) was found to be not significant between the two groups of mouth opening, lateral movements and occlusion when compared between the two groups which implies that both groups

have the same efficiency. However there was a significant p value ($p < 0.05$) between the two groups of deviation of mandible and temporomandibular joint disorders which was less in the surgical group than in the conservative group.

Conclusion

From the above study we can conclude that the treatment plan should be patient specific and follow the algorithm for a particular type of fracture.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 950

A Comparative Evaluation of Conventional Miniplates and Modified 3D Plates in Mandibular Parasymphyseal Fractures Involving or in Close Proximity to Mental Foramen Region

Dr. Raymond Joseph Periera

Indira Gandhi Institute of Dental Sciences, Puducherry

Abstract

Introduction

Farmand and Dupoirieux in the year 1992, presented three dimensional plates, the quadrangle geometry of which facilitates a good stability in three dimensions at the mandibular fracture site. But there is a limitation for its use in the cases of oblique fractures and those involving the mental nerve or near the mental foramen due to varying anatomy of the mental foramen and excess implant material of the 3D plates. Hence, the modified 3D plates were designed to provide adequate immobilization with relatively less hardware.

Aims and Objectives

The purpose of study was to compare the efficacy of conventional miniplates and modified 3D plates in the preservation of the mental nerve, thereby constraining the neurosensory disturbances allied with parasymphyseal fractures involving or near the mental foramen region.

Methodology

Forty patients were randomly divided into two groups. Group I: The patients treated using the 2 mm conventional titanium miniplate. Group II: The patients treated using the 2 mm modified three-dimensional titanium miniplate.

Results

Two techniques were used for immobilization, fixation and stabilization of mandibular parasymphyseal fractures. Modified 3D plates superior to 2D plates in terms of functional recovery, stable functional occlusion, implant stability, Prolonged operative time in terms of fixation, delayed restoration of bite force compared to modified 3D plates and reduced post-operative complications like infection or neurosensory disturbances.

Conclusion

The findings suggest use of modified 3D plates as a better alternative to conventional miniplates, in oblique mandibular parasymphyseal fractures and those involving mental foramen.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 961

Comparitive Evaluation of 1-Point, 2-Point, 3-Pointfixation in the Treatent of Zygomaticomaxillary Complex Fractures: A Series of 80 Cases

Dr. Minu Parvathi D.

P.M. Nadagouda Memorial Dental College and Hospital Bagalkot

Abstract

Background

The zygomaticomaxillary complex functions as the main buttress for the lateral portion of middle third of facial skelton and because of its prominent position and convex shape, it is frequently fractured, alone or with other bones of mid face. The management of ZMC fractures is debatable as the literature is saturated with various theories. A number of techniques, from closed reduction to open reduction and internal fixation can be effectively used to manage these fractures. Controversies lie right from amount of fixation (1-, 2-, 3- or 4 point fixation) required to the ideal approach and there is no conclusive view on its ideal line of management.

Aim

The purpose of this study is to compare one point fixation in zygomatic buttress area, 2 point fixation in zygomatic buttress and frontozygomatic region, 3 point fixation in zygomatic buttress, FZ region and infra orbital rim region in zygomaticomaxillary complex fractures.

Materials and Methods

This study included 80 patients who underwent treatment of ZMC fractures between 2013 and 2020. Thirty five patients were treated with ORIF using 2 point fixation, twenty patients were treated with 3 point fixation, remaining 25 patients with one point fixation.

Results

Among all the patients, who were operated with 3 point fixation postoperatively showed statistically significant improvement.

Conclusion

This study concluded that 3 point fixation is superior than 2 point and 1 point fixation in reducing malar asymmetry in ZMC fractures.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 973

Retrospective Analysis on Changing Norms in Zygomatic Maxillary Complex Fractures

Dr. Gummadala Swapna Priya

Narayana Dental College and Hospital, Nellore

Abstract**Introduction**

The zygomaticomaxillary complex fracture is difficult to treat fracture, mostly because of its pentapod anatomic form which necessitates a patient-specific treatment approach. This retrospective study aims at evaluating the changing trends in ZMC fractures.

Materials and Methods

A total of 245 cases were included in this retrospective study, treated either surgically or conservatively, for ZMC fractures in the time period of 3 years (2017–2019). All the patients were assessed and compared based on these parameters—gender, age, etiology, anatomic site of the fracture and type of treatment given and associated maxillofacial fractures. Fracture etiology was segregated into: motorized road traffic accidents, road traffic accidents under the influence of alcohol, interpersonal violence, domestic violence, sports injury and self falls.

Results

94.3% of the 245 study participants were men, while 5.7% were women. The most common age group was 21 to 40 years (60.8%). In our study, the most common cause of Zygomatic fracture was road traffic accidents with or without the influence of alcohol (41.6%). ORIF—3 point fixation (32.7%) was the most commonly used treatment, followed by 4 point fixation (27.3%). The Maxillary buttress region was the most frequent site of fracture (93.5%), followed by the other sites.

Conclusion

Due to the shifting patterns of injuries, most surgeons no longer see conventional fracture lines. Instead, patients have unusual and hybrid fracture lines, which necessitate more fixations due to the injury's complexity. The tendency is now shifting toward tailoring treatment choices for individual patients.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 974****Post Traumatic Cleft Palate***Dr. Tejaswini Nerkar**Indira Gandhi Institute of Dental Sciences, Puducherry***Abstract**

Cleft palate is a condition in which the two plates of the maxilla that form the hard palate are not completely fused. Congenital cleft palate is due to the failure of fusion of the lateral palatine processes, the nasal septum, or the median palatine processes. However, traumatic cleft palate is an acquired condition which occurs due to any impact to the face. Traumatic cleft may result in velopharyngeal insufficiency, nasal regurgitation, hyper nasal voice resonance and nasal emissions during speech and speech articulation errors. Traumatic cleft palate is most commonly and more efficiently treated by transpalatal wiring. Primary suturing is done in cases where required. In cases where trans-palatal wiring fails to suffice, various local flaps are used to close the cleft. Tongue flap is the most commonly opted one for the closure of traumatic clefts. This presentation is a compilation of a case of post traumatic cleft palate case reconstructed with dorsal tongue flap.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 985****Olecranon Graft: A Newer Dimension for Orbital Floor Reconstruction***Dr. Aswathi Krishnan**Faculty of Dental Sciences, IMS, BHU***Abstract**

Orbital floor fractures are one of the most commonly encountered maxillofacial fractures due to its weak anatomic structure. Orbital floor fractures may lead to enophthalmos, limitation of eye movements, and diplopia due to periocular muscle entrapments and even visual disturbance. The main goal of the treatment is to reposition the entrapped orbital contents and restore the shape and the volume of the orbit to achieve acceptable functional and cosmetic results and prevent late complications. Autogenous bone graft is a useful source for the orbital floor due to their low risk of postoperative infections and better healing properties. Olecranon is a one of the bone graft harvest area used both in craniofacial surgery as a bone graft source in recent years. The olecranon bone graft is usually harvested and shaped and is placed to the orbital floor defect in onlay fashion by leaning it to the orbital floor remnants. Despite being a cancellous bone graft, it has considerable rigidity. Olecranon bone graft is a suitable autogenous option for orbital floor reconstruction due to its unique structural behaviour, which provides both enough strength like cortical bone grafts and considerable moulding capacity like the cancellous bone grafts with low rates of postoperative complications and donor area morbidity. The olecranon bone graft is hence, a promising alternative for the reconstruction of orbital floor defects due to its plasticity and biocompatibility without any donor site morbidity.

References

1. Yesiloglu N, Sirinoglu H, Sarici M, Temiz G, Filinte GT. A New Option for the Reconstruction of Orbital Floor Defects: The Olecranon Bone Graft. *Ann Plast Surg.* 2015 Oct;75(4):401–6.
2. Micev AJ, Kalainov DM, Slikker W 3rd, Ma M, Richer RJ, Cohen MS. Comparing Morbidities of Bone Graft Harvesting from the Olecranon Process and the Distal Radius. *Plast Reconstr Surg Glob Open.* 2016 Feb 19;4(2):e623.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 995****Etiology, Incidence and Management of Maxillofacial Trauma: An Institutional Experience of Three Years***Dr. Sirisha S. P.*

Bapuji Dental College and Hospital

Abstract

Introduction

Maxillofacial injury has become one of the major health problems worldwide. Facial fractures constitute a significant percentage of trauma. The incidence varies according to geographical area and socioeconomic status.

Aim

To evaluate etiology, incidence and management of maxillofacial trauma in last 3 years.

Materials and Methods

This was a retrospective study carried out on maxillofacial fractures between 1st January 2017 to 31st December 2020 at our Institute. Data was collected from medical records of patients admitted for treatment in the hospital and also case papers of patients treated on OPD basis. The patients were assessed by age, gender, etiology, type of injury and treatment performed for different types of maxillofacial fractures that were divided anatomically.

Results

A total of 334 patient had maxillofacial injuries, nearly 90% of the patients were men, and most frequent age group was 21–40 years (71.85%). Road traffic accidents (81.74%) were the primary factor followed by assault (11.98%). Among the maxillofacial fractures, mandible (46.21%) was most frequently involved followed by ZMC region (29.58%).

Conclusion

This retrospective analysis revealed that accidents in young male patients are most frequent etiology for maxillofacial trauma. ORIF remain the mainstay in the management of maxillofacial trauma.

References

1. Wusiman, Maimaitituexun, Saimaiti A, Moming A. Epidemiology and pattern of oral and maxillofacial trauma. *Journal of Craniofacial Surgery*. 2020 Jul 1;31(5):e517–20.
2. Malik S, Singh, Kaur, Yadav S, Mittal. Orofacial trauma in rural India: A clinical study. *Chinese journal of traumatology*. 2017 Aug 1;20(4):216–21.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 1019

Suturing in Accident and Emergency: A Stitch at Night Time-Teaches Us Life Time

Dr. Piyush Sandeep Lunkad

Dr. DY Patil Vidyapeeth, Pune

Abstract

Introduction

Soft tissue injuries are the most common type of injuries seen in the emergency department following road traffic accidents.

Patients and Methods

This is a retrospective study, conducted from August 2019 to October 2021 in tertiary care hospital, in which patients who were attended to the emergency department with craniomaxillofacial trauma were

included. The subjects were analysed for patterns of extraoral soft tissue injuries and postoperative scar tissue formation.

Results

A total number of 21 patients were included, out of which 4 patients were lost to follow up. The mean age group is between 30 and 50 years. Abrasions were the most common type of injury followed by lacerations, contusions. Injuries to the upper third and lower third of the face were significantly higher in non-helmeted people. We performed early wound debridement and suturing of soft tissue defects. This will prevent the communication of wounds to the external environment, thereby decreasing the rate of soft tissue infection with minimal scar tissue formation.

Conclusion

Abrasions are the most common type of soft tissue injury and the common site was the forehead followed by nose and orbit. Early intervention of suturing soft tissue injuries will decrease the rate of infection and scar tissue formation.

Reference

1. Road safety in India-status report—Dinesh Mohan, Geetam Tiwari, Kavi Bhalla; transport research and injury prevention programme—WHO Collaborating Centre-2015

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 1022

Biomaterials in Orbital Reconstruction

Dr. D. Manikanta Kumar, Prof. Dr. Kishore Kumar R. V.

Narayana Dental College and Hospital

Abstract

Orbital bones are frequently fractured during significant trauma to the maxillofacial region. Such fractures are considered unique among the craniomaxillofacial fractures which result in various structural defects in the orbital region. Incidence of fractures in the orbital region is found to be 10–25% of the total facial fractures. Management of such orbital fractures pose a challenge to every surgeon owing to its complex anatomy, relationship to vital structures such as the globe and the brain and most importantly the sense of vision. The defects caused due to trauma causes various forms of morbidity and thus need to be repaired with minimal complications. Patients frequently require surgical intervention to correct and restore the orbital shape and volume and this is usually accomplished by inserting a biomaterial. The biomaterial is broadly defined as a natural or synthetic substance that is suitable to be incorporated into a living tissue particularly to aid healing. Various biomaterials are being used in the reconstruction of the orbit which are categorized into autologous, allogenic and alloplastic. Choosing the appropriate indication for intervention and management protocol is critical in achieving the desired surgical outcome. Hence, this poster depicts the choice of biomaterials that can be used in the reconstruction of various structures of the orbit.

Reference

1. Hartmann, P. Kammerer, L. Cascant Ortolano, K. Sagheb, M. Seiler, Customized products for orbital wall reconstruction—a

systematic review, *British Journal of Oral and Maxillofacial Surgery* (2021).

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 1053

Conchal Graft for Orbital Floor Fracture

Dr. Neha V. Nainoor

Dayananda Sagar College of Dental Sciences

Abstract

Orbit is a skeletal cavity located on either side of root of nose that houses eyeball, ocular muscles, vessels, nerves and lacrimal gland. Orbit is formed by 7 bones—Maxilla, Palatine, Frontal, Zygomatic, Sphenoid, Ethmoid and Lacrimal. In craniofacial trauma, nearly 40% of cases involve the orbital structures. Isolated orbital wall fractures account for 4–16% of all facial fractures. If fractures that extend outside the orbit are included such as those of the zygomatic complex (ZMC) and naso-orbitoethmoid (NOE), this accounts for 30–55% of all facial fractures. Fractures of the orbital cavity occur mainly in the orbital floor medial to the infra-orbital groove and the nerve canal. Orbital floor fractures are regularly involved in combination with fractures of the medial wall. This poster will be presenting a case of 58-year-old male patient who reported to the Emergency Department with a history of road traffic accident with pain and swelling over right zygomatico-maxillary complex (ZMC) region. The patient was diagnosed with right zygomatico-maxillary complex (ZMC) fracture involving floor of orbit, right fronto-zygomatic (FZ) suture fracture and zygomatic buttress fracture based on the CT findings. Subciliary incision was given to expose right orbital floor and herniated content elevated and fixed with orbita plate. Orbital floor reconstruction done by conchal cartilage harvested from right ear through anterior approach.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 1078

External Pin Fixation for Pathological Fracture

Dr. Mahima Choudhary

Mahatma Gandhi Dental College and Hospital

Abstract

Pathologic fracture represent growing concern in the field of musculoskeletal oncology. The incidence of pathologic fractures is rising primarily due to improved diagnosis and treatment of metastatic disease leading to prolonged survival. Pathologic fracture occur

through areas of weakened bone attributed to either primary malignant lesions, benign lesions, metastasis or underlying metabolic abnormalities with the common factor being altered skeletal biomechanics secondary to pathologic bone. Impending fracture may require prophylactic fixation meaning surgical intervention in the form of internal fixation prior to fracture as a means of augmenting inherently weak bone and preventing future failure. Treatment of pathologic fracture is dictated by pathophysiology of causative lesion and expected survival. Altered disease biology leads to decreased or destroyed fracture healing potential. Indications of external fixator are pathological fractures, resectional defects, grossly comminuted fractures. External pin fixation offers peculiar options in singular comminution or defect areas associated with bone pathology and/or soft tissue alterations. This poster is presenting a 45 years male patient, who presented to the OPD of Department of OMFS, MGDH, Jaipur with the complaint of pain in left lower jaw since 6 months. Patient was an operated case of Carcinoma Tonsil, who also received chemotherapy and radiotherapy. OPG of the patient revealed pathological fracture of left angle of mandible. The patient was given 30 cycles of Hyperbaric oxygen. Following HBO therapy, the fractures segments were managed using external pin fixation under LA. Post-operative healing was favourable. Follow up period was satisfactory.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 1080

Antibiotic Impregnated Plates in the Management of Infected Facial Fractures

Dr. Rahul Gupta

Mahatma Gandhi Dental College and Hospital, Jaipur

Abstract

Musculoskeletal infections remain a challenge for oral maxillofacial surgeons and infectious disease specialists. Bone provides a unique milieu for bacteria, with low vascularity and turnover rate. Most of the maxillofacial trauma infections are caused by biofilm-forming bacteria. Biofilm consists of hydrated matrix of polysaccharide and protein. Once formed, it protects the microorganism from antimicrobials, opsonization, and phagocytosis, thus contributing to the chronicity of infections. In healthy bone, local antibiotics concentrations might be less than 20% of serum levels, as is for most beta-lactams. Their efficacy is further diminished by biofilms, which decrease molecule penetration. With intramedullary infections, the optimal way of debridement is to ream the medullary canal. After reaming, it takes approximately 4 weeks for bone to re-vascularize. Therefore, even with prolonged antibiotic therapy, local bone tissue remains without bactericidal concentrations, thus not interfering with bacterial growth. In such cases local antibiotic therapy is a useful technique that results in high local concentrations of antibiotics with minimal systemic levels and without systemic side effects. This method in the form of antibiotic impregnated plates used in the treatment of osteomyelitis and in open fractures controls infection. With the goal of avoiding more than one procedure in these patients, we present our single-procedure technique of treatment with plates with antibiotic-impregnated bone cement, which combines local antibiotic delivery with good alignment and intramedullary fixation.

So the primary objective of this poster is to perform a systematic review of current evidence on use of plates with antibiotic-impregnated bone cement.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 1203

Comparative Study Between 2 mm Conventional, 3D Titanium Miniplates, 1.3 mm Titanium Miniplates and 2 mm 3D Locking Miniplates in Management of Mandibular Anterior Fractures

Dr. Raminderpal Singh

Manipal College of Dental Sciences Mangalore

Abstract

ORIF for fracture includes many techniques like wire osteosynthesis, compression plates, DCP, reconstruction plates, miniplates, lag screws and 3-Dimensional plates.

Aims and Objectives

A retrospective study to evaluate the efficacy of 2 mm conventional and 3D titanium miniplates, 1.3 mm miniplates and 3D locking miniplates in the management of mandibular anterior fractures.

Methods

A retrospective study was conducted on 40 patients who presented with mandibular anterior fractures. The patients were divided into 4 groups of 10 each. Each group were treated using 2 mm conventional miniplate, 2 mm 3D titanium miniplate, 1.3 mm titanium plate and 2 mm 3D locking miniplates. The patients were evaluated for pre and post-operative occlusion, post-operative complications and radiographic healing.

Results

The intra-group pre and post-operative occlusion was statistically significant among the 4 groups without any significant inter-group difference. Post-operative complications like infection was found among 5% in patients treated with 2 mm 3D locking plate. Radiographic healing in 1st and 12th week was statistically significant among all the 4 groups.

Conclusion

All the 4 methods were equally effective in the management of mandibular anterior fracture. All the plates have their own advantages and disadvantages and can be applied depending upon the type of fracture.

Reference

- Mittal Y, Varghese KG, Mohan S, Jayakumar N. A comparative study of 3-dimensional titanium versus 2-dimensional titanium miniplates for ORIF of mandibular parasymphysis fracture. *Journal of maxillofacial and oral surgery*. 2016 Mar 1;15(1):93–8.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 1218

Maxillofacial Trauma Due to Animal Attacks: A Case Series

Dr. Mahadevi Hiremath

Al-Badar Rural Dental College and Hospital, Gulbarga

Abstract

Animal attack injuries are frequently seen in trauma centres. Animal attacks have grown recently as a result of human expansion into the wild and reduced forest cover. As a result, wild animals and humans must occupy the same habitat and there is an increase in wild animal-human interaction. Animal attack injuries to the face can result in functional, cosmetic and structural deficits. The head and neck are the third most usually affected areas, after upper and lower limbs. Because of the diverse animal microflora, there is a greater risk of polymicrobial infections. The wound should be carefully explored, debrided and repair of nerves, vessels, salivary duct or gland should be attempted. Layer wise closure with minimal deep suture to reduce dead space is recommended. The skin suturing must be done with fine non-resorbable suture material. The majority of maxillofacial fractures caused by animal attacks are crushed and may have numerous comminuted fractures, making internal fixation more difficult than with simple fractures. In this poster, we discuss three such wild animal attacks that result in maxillofacial injuries, as well as to share our experience in treating them.

Category: Student: E-Poster

Theme: Craniomaxillofacial Trauma

Reg. Num.: 1250

Frontal Sinus Fracture Management

Dr. Madala Bhargav Ram

K.V.G. Dental College and Hospital

Abstract

The classification and management of these fractures are not standardized, with more than 50 review articles advising the clinician on how to classify these fractures, and different treatment modalities. This can be confusing to the clinician. Treatment options may include observation, reconstruction, obliteration, cranialization, osteoneogenesis and ablation. The management depends primarily on structures involved. The key with frontal sinus fracture is the accurate management of NFOT. Due to the intimate relationship of the frontal sinus with brain, it is very important to keep the Patient on a regular follow up, with radiological investigations such as CT scan, and clinical features.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.:** 1254**A Clinical Audit***Dr. Amin Pranay**A B Shetty Memorial Institute of Dental Sciences***Abstract****Introduction**

Mandibular condylar fracture account for 17.5–50% of maxillofacial fracture. In principle, there are two basic treatment modalities for management of condylar fractures, Closed reduction and open (surgical) reduction with internal fixation (ORIF). There are still controversies regarding the treatment modality of choice. Over the decades many approaches for surgical management have been documented. We have compared these approaches with multiple parameters.

Aim

The purpose of this Medical Audit is to analyse the various approaches to the condylar fracture.

Materials and Methods

A medical audit was conducted between 2016 and 2021 by obtaining data of patient presented with condylar fracture and surgically managed at our institution. Data were obtained by reviewing clinical case record sheets and Image records. This includes age, sex, mode of injury, type of fracture, management modality (Approaches, Fixation methods) and complications. Patient without sufficient clinical and Imaging record were excluded from the study. Statistical analysis will be done using SPSS software version 23.0.

Results

Approaches for specific site of condylar fracture, surgical time, and perioperative complications will be evaluated.

Conclusion

Will be summarized.

References

1. Bhutia O, Kumar L, Jose A, et al. Evaluation of facial nerve following open reduction and internal fixation of subcondylar fracture through retromandibular transparotid approach. *Br J Oral Maxillofac Surg* 2014;52:236–40.
2. Handschel J, Rüggeberg T, Depprich R, et al. Comparison of various approaches for the treatment of fractures of the mandibular condylar process. *J Craniomaxillofac Surg* 2012;40:e397–401.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.:** 1271**Access to Subcondylar Fractures Through Transmassetric Anterio-Parotid Approach***Dr. Poovaraghavn J.**SRM Kattankulathur Dental College***Abstract**

Mandibular fractures are the most common among all the facial fractures and condylar fractures accounts 25–35%. The etiology is mainly road traffic accidents, sports, interpersonal violence and fall. Primary cause RTA, assault. Bilateral condylar fractures are commonly associated with the symphysis fracture of the mandible. Open reduction of mandible had always been controversial. However, to prevent TMJ ankylosis, improve interincisal distance, occlusion and function, correct facial asymmetry ORIF is preferred. There are many approaches but they have there disadvantages. It has been described high submandibular transmasseteric approach is safe technique for condylar fracture management as it provides better accessibility, visibility, less time, preserving facial nerve integrity and with no or minimal complications.

Keywords ORIF-open reduction and internal fixation, RTA-road traffic accident

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.:** 1280**The “White-Eyed” Orbital Blowout Fracture Reconstruction***Dr. Prathyusha Reddy B.**Mamatha Dental College***Abstract**

Medial wall orbital fractures though commonly accompanying orbital floor fractures can also occur alone. There are two primary theories explaining the pathophysiology of medial wall fractures: the hydraulic theory and buckling theory. “White-eyed” trapdoor fractures necessitate immediate surgery to reduce the risk of muscle fibrosis. Trapdoor fractures are more common in the pediatric population. The vast majority of nondisplaced fractures without entrapment do not require surgery. Evaluating patients with medial wall fractures requires evaluation of muscle motility and relative enophthalmos. Patients with entrapped muscles require immediate treatment to prevent permanent injury to the muscle. The pediatric white-eyed blowout fracture with entrapment of the inferior rectus muscle is well recognized as an easily missed injury with significant morbidity if left untreated. Early exploration and release of the entrapped muscle combined with implant reconstruction of the medial orbital wall within 2 weeks results in complete resolution of diplopia and full recovery of extraocular movements. Delayed treatment and release of the soft tissues without orbital wall reconstruction are associated with restricted gaze and diplopia. Medial orbital wall fractures with entrapment are rare, but early recognition and operative release of the entrapped muscles result in better outcomes.

Reference

1. Thiagarajah, Christopher, and Robert C Kersten. “Medial wall fracture: an update.” *Craniomaxillofacial trauma & reconstruction* vol. 2,3 (2009): 135–9.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 1285****Overview of Different Techniques of Miniplate Fixation for Mandibular Angle Fracture***Dr. Harsh Dave***Abstract**

Standard treatment for mandibular angle fracture management with miniplates according to Champy et al. consists of fixation of one plate at superior border of mandible, ventral to external oblique line. It has been documented by various authors and surgeons that two miniplate fixation, one at upper border and one at lower border provides superior stability, better reduction of fracture. As fixation of second miniplate at lower border is difficult with traditional Intraoral/Transoral approach due to low accessibility, unfavourable anatomical position and through Extraoral approach there are high chances of damaging the facial vessels and marginal mandibular branch of facial nerve, OMF surgeons have come up with a superior technique i.e. Transbuccal approach which has been widely accepted by the surgeons due to ease of accessibility, no external scarring, greater soft tissue coverage, less chances of plate fracture by over bending, lower infection rates. It is now generally combined with the intraoral approach for the best results. Any approach to mandibular angle region depends on surgeons preference for accessibility, ease of procedure, aesthetic demands from patient, surgical expertise. The Transbuccal approach fulfills all criterias and bypasses disadvantages of traditional approaches, thus can be a great potential alternative to them for fixation of mandibular angle fractures.

Reference

1. Kumar S, Prabhakar V, Rao K, Brar R. A Comparative Review of Treatment of 80 Mandibular Angle Fracture Fixation with Miniplates Using Three Different Techniques. *Indian Journal of Otolaryngology and Head & Neck Surgery*. 2011;63(2):190–192.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 1333****Comparison of Titanium Mesh versus Medpor Implant in Orbital Floor Reconstructions***Dr. Gunjan Pani**College of Dental Sciences***Abstract****Introduction**

Orbital wall fractures are quite common consequence of maxillofacial trauma. However, owing to its complex anatomic structure and

relatively thin orbital walls, corrective restorations and fixations are difficult. Etiology commonly includes assault, traffic accident, sports and fall. Improper reconstruction of orbit frequently results in functional and aesthetic complications. Aim of study is to evaluate effectiveness of titanium mesh and medpore implant in traumatic orbital floor reconstructions.

Materials and Methods

Study groups included 8 patients with orbital floor fracture. Study groups—group A (Medpore) and group B (titanium mesh). Postoperatively following parameters were assessed: Pain, Swelling, Subconjunctivalhaemorrhage, Diplopia, enophthalmos, infraorbitalparesthesia, Implant failure, Infection at intervals of 1, 3, 6 weeks and 3 months.

Results

All patients were followed up for 3 months. Diplopia is absent in both groups at 3, 6 weeks 3 months post operatively. Infraorbitalparesthesia is absent in both the groups at 3 weeks,6 weeks and 3 months post operatively. Infection is present in all three patients in group B. None of the patients in group A showed any signs of infection at 1, 3, 6 weeks and 3 months post operatively. No implant failure was noted.

Conclusion

Both titanium mesh and medpore function well for internal orbital reconstruction. In spite of limited number of cases and short follow up period, initial results were satisfactory, to conclude that medpore and titanium mesh are reliable options in reconstruction of orbital floor defects.

Reference

1. Premalatha Shetty et al. Options in orbital floor reconstruction in blowout fractures: a review of ten cases. *JOMS* 8(2) 137–140.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 1335****Torque Controlling Devices to Avoid Mini Screw Breakage***Dr. Bhamidipati Bhaskar**P.M.N.M Dental College and Hospital, Bagalkot***Abstract**

Trauma in the oral and maxillofacial region, frequently requires open reduction internal fixation using mini plates and screws. In that, Mini Screws head breakage or distortion is one of the common problem encounters during internal fixation. This presentation discuss about various torque controlling devices which use to avoid mini screw breakage or distortion in the procedure fixation of craniomaxillofacial trauma.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 1348****Use of Suture as an Alternative to Stainless Steel Wire for Stabilization of Open Cap Splint in Pediatric Mandibular Fractures***Dr. Thiru Vikrama Narayan S., Dr. B. Logeshwaran**Sri Venkateshwaraa Dental College***Abstract****Introduction**

Management of paediatric mandibular fractures is challenging due to the presence of mixed dentition and growth pattern. Most widely used method is occlusion splint which are secured with the help of circummandibular wiring. We would like to describe a new method in which the occlusion splint was stabilized with the help of suture.

Case Presentation

A 7-year-old male child reported to Department of Oral and Maxillofacial Surgery with a chief complaint of pain and difficulty in chewing since 1 month. There was obliteration of buccal vestibule in 74 region. The OPG showed Bilateral parasymphysis fracture with left condylar head fracture and intruded 74. Impression was made to fabricate acrylic cap splint. After taking crevicular incision from 71 to 75 and flap reflection the fracture segments were reduced manually and stabilised using a cap splint which was secured by circummandibular suturing using bone awl and 2–0 Vicryl. The cap splint was adequately stable at the end of 6 weeks with all sutures intact.

Discussion

The use of suture instead of the traditional wire has excellent patient compliance due to painless removal. Also there is no damage to the developing tooth buds and if any remnants are left it will resorb.

References

1. Priya Vellore, Gadipelly S, Dutta B, Reddy, Ram S, Parsa A. Circummandibular wiring of symphysis fracture in a five-year-old child. Case reports in dentistry. 2013.
2. Thomas S, Yuvaraj V. Atraumatic placement of circummandibular wires: a technical note. International journal of oral and maxillofacial surgery. 2010 Jan 1;39(1):83–5.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 1353****Frontal Bone Fracture at Casualty With Immediate Surgical Management: A Case Report***Dr. Mili Hemant Mehta**D Y Patil Dental College and Hospital***Abstract**

Frontal sinus fractures are relatively uncommon maxillofacial injuries, making up only 5–12% of all facial fractures. Associated intracranial, ophthalmologic, and other maxillofacial injuries are very common because of the force of injury required to fracture the frontal bone. The reconstruction of frontal bony defects may be a challenging procedure because the restoration of both functional integrity and aesthetics is crucial in the frontal sinus area. Treatment of comminuted fractures of the anterior wall of the frontal sinus often represents a problem. Several operative techniques and autogenous, allogenic, and implant biomaterials have been extensively used to reconstruct craniofacial bony defects. The use of titanium mesh allows to restore great bony loss, being easy to shape and size, sufficiently rigid to prevent sagging or displacement. In this presentation we are going to discuss a case of outer table fracture with right supraorbital rim fracture and reconstruction done with Titanium mesh. Patient was treated immediately due to the necessity to manage the severely abraded soft tissue at the forehead.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 1367****Management of Oral and Maxillofacial Injuries Caused by Animal Attack***Dr. Sakthi S.**Adhiparasakthi Dental College***Abstract**

Injuries caused by animal attacks may involve either soft or hard tissues or both, and is presented as perforations, lacerations, crushes, avulsion or fractures. Number of bacteria and virus can be found in such injuries and thus carry high risk of infection. Although the infection rate is low due to excellent blood supply to face, the injuries have disfiguring effect. The treatment of animal inflicted injuries must address the soft tissue defect, neurovascular injuries, and bone injuries as well as prevention of post treatment infection. Management of such treatment include thorough debridement, antibiotics, vaccination and surgical repair. Primary wound repair is the treatment of choice for most clinically uninfected bite wound where as delayed closure should be reserved for wounds at high risk of infection or already infected wounds and tissue defect may require local flap or microvascular re-implantations.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 1457****Challenges of Orbital Floor Fracture Repair Using Preformed Implants: A Clinical Experience***Dr. Archana Sen**GDC Goa***Abstract****Background**

Orbital fractures can result in dramatic consequences, which may cause a spectrum of sequelae. The indication for repair of orbital wall fractures is established by a combination of clinical and radiological findings which include diplopia, enophthalmos and defect size of > 50% with or without incarceration of orbital contents respectively.

Aim

To assess the treatment outcomes of orbital blowout fracture repair using preformed orbital plates by evaluating and comparing the preoperative and postoperative clinical and radiological data.

Methods

An in vivo prospective analysis was performed on a group of 14 patients who underwent repair of orbital blowout fracture defects and open reduction and internal fixation of associated fractures. The preoperative and postoperative clinical and radiographic data was compared.

Results

Overall the patients had satisfactory clinical results with mild persistent enophthalmos in 3 patients and improvement in 2, persistent diplopia in 2 patients and mild restriction of extraocular muscle movements in 1. The postoperative CT data showed that there was no significant difference between the orbital volumes of repaired side and the uninjured side ($p < 0.02$).

Conclusion

To summarize, repair of orbital blowout fractures are extremely challenging procedures and use of preformed plates was found to be a viable option for the same. It ensures satisfactory results, confirmed both clinically and radiographically. Further improvements in the study design with respect to the sample size would have led to more clinically relevant conclusions.

References

1. Scolozzi et al. The Journal of Craniofacial Surgery & Volume 20, Number 4, July 2009.
2. ShintaroSukegawa et al., Preformed Orbital Wall Reconstruction Plate for Orbital Fractures. J. Hard Tissue Biology Vol. 26(2): 231–236, 2017.

Category: Student: E-Poster**Theme: Craniomaxillofacial Trauma****Reg. Num.: 1519****Direct Sinus Augmentation Using Bovine Bone Graft and Concurrent Implant Placement: A Prospective Cone Beam Computed Tomographic Analysis***Dr. Neha Umakant Chodankar**Goa Dental College and Hospital***Abstract**

Nowadays, the use of dental implants for oral rehabilitation have become a clinical routine. Early loss of teeth in the posterior maxilla results in alveolar ridge resorption due to bone atrophy and pneumatization of maxillary sinus causing insufficient vertical bone volume on posterior maxilla, in turn effects the ability to place implants. To address these limitations, various treatments like Sinus lift with bone grafting, Zygomatic implants, Pterygoid implants etc. are introduced. Sinus floor augmentation increases the amount of bone in posterior maxilla by elevating sinus membrane from underlying bone and placement of bone graft beneath it. Various types of grafting material have been successfully utilized for sinus augmentation. Autogenous bone, allografts and xenograft bone, or a combination of all may be used for sinus augmentation. These grafting materials have a high success rate nevertheless, they have their associated disadvantage of second site surgery or the cost factor. Bovine bone has shown high biocompatibility with oral tissues. Two main techniques of sinus floor elevation are—Lateral window (direct) sinus augmentation technique and transcrestal (indirect) sinus augmentation technique. This poster highlights cases where direct sinus augmentation was done using bovine bone graft with concurrent implant placement.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.: 147****Corticobasal Implants: Boon or Bane***Dr. Kaniganti Gayathri Prasanna**Drs. Sudha and Nageswara Rao Siddhartha Institute of Dental Sciences***Abstract**

Nowadays, the use of dental implants for oral rehabilitation has become a clinical routine. Several studies reported successful and predictable results in patients with normal bone volume and density which provide adequate stabilization with implants of standard diameter and length. Rehabilitation of atrophied edentulous jaws by placing implants is a challenging procedure. Sometimes patient's

residual alveolar bone may not be suitable for conventional implants placement or the patients may not be willing for expensive and extensive surgical procedures like ridge augmentations and sinus floor elevations. In such cases cortical/basal implants is a viable treatment option. Basal implants give support from the basal bone area which usually remains free from the infection and less prone to resorption. In cortical implants there is no need of second stage for abutment placement. It is a minimally invasive technique which has the advantage of immediate loading also. My E-poster highlights a case of full mouth rehabilitation with cortical implants along with their pros and cons.

Keywords Bi-cortical implants, Strategic implants, Key hole implantology

Reference

1. Ali SM, Mahmud PK, Othman KS, Samad AA. Single Piece Dental Implant: A Remedy for Atrophic Ridges. *International Journal of Otolaryngology and Head & Neck Surgery*. 2019 Nov 22;8(06):271.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 149

Use of Platelet Rich Plasma in Autogenous Bone Graft in Implantology

Dr. Sarihaddu Amulya Sudha

Drs. Sudha and Nageswara Rao Siddhartha Institute of Dental Sciences

Abstract

Background

The use of platelet-rich plasma (PRP) in implantology has potentiated bone regeneration and the healing process, reducing the postoperative period, inflammatory process, and blood loss. PRP is performed by autologous blood centrifugation, used to improve the integration of bone, cutaneous, cartilaginous or fragile grafts to stimulate wound healing. Several bone implants are applied in clinical practice, but none meets the requirements of an ideal implant. PRP used during implant placement acts as a surface treatment to stimulate osseointegration, in maxillary sinus lift, treatment of peri-implant bone defects (after peri-implantitis during placement of an implant with insufficient bone volume) or placement of implants after extraction platelet-rich plasma (PRP) is an easy and inexpensive way to obtain growth factors in physiologic proportions that might favor the regenerative process. Promising results have also been obtained in implant surgery when PRP was used in isolation as a coating material, as it has proven successful outcomes with minimal invasivity.

Aim and Objective

To assess the efficacy of platelet-rich plasma (PRP) in implantology in Autogenous bone graft. The use of PRP in implantology presents promising results in the regeneration and healing of the tissues. However, more study is needed to verify its long-term efficacy.

Reference

1. Souza GMO, Borges CL, Ratis RNRS, Pedrosa VKL (2019) Use of Platelet-Rich Plasma in Autogenous Bone Graft in Implantology. *Int J Oral Dent Health* 5:096.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 252

Mix to Fix

Dr. Ruben Abraham James

AJ Institute of Dental Science, Mangalore, Karnataka

Abstract

The maxillary sinus grafting procedure has proven to be an acceptable modality for bone augmentation to provide a base for Endosseous implants, routinely used for rehabilitation of posterior maxilla. Perforation of the membrane is the most common complication in this type of procedure. In most instances the repair of this perforation is necessary to contain particulate grafting material within the elevated region and to complete the procedure. Literature shows various new techniques for the management of perforation of the Schneiderian membrane. We are presenting a case report of repair of sinus membrane perforation with PRF membrane along with bone augmentation and immediate implant placement, with post-operative follow up period of 6 months.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 275

Rehabilitation With Immediate Loading of Atrophic Maxillae Using Zygoma Implants and Pterygoid Implants

Dr. Suriyakumar N., Dr. Priyanka S.

Madha Dental College and Hospital

Abstract

The atrophic and edentulous jaw can pose a number of challenges for the implant clinician. In simple terms, the amount of bone that remains is insufficient for the conventional placement of a dental implant. A variety of treatment strategies can be employed to enable implants to be placed despite the paucity of bone stock in either the mandible or the maxilla. Conceptually these strategies follow one of

two pathways: either augmentation of the bone, or the novel utilization of the remaining bone. This study will discuss patient assessment, treatment planning, and the range of contemporary options available to enable fixed implant based rehabilitation of each jaw. “The edentulous patient is an amputee, an oral invalid, to whom we should pay total respect and rehabilitation ambitions”.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 381

Zygomatic Implants: A Hope for Maxillectomy Patients: A Critical Review

Dr. Devang Dwivedi

Rama Dental College Hospital and Research Center

Abstract

Background

Maxillectomy often results in maxillary bony defect and serious oral dysfunction. Extensive maxillary defect and atrophic maxilla pose a challenge for prosthetic rehabilitation. In patients with maxillary defects, prosthetic rehabilitation is done with obturator, however, further extension of the resected margins lead to the less stable prosthesis. To overcome this, Branemark, developed the zygomatic implant as a solution to the lack of maxillary bone support for prosthetic rehabilitation. Zygomatic implants are an avant-garde to complex and invasive free vascularised osteocutaneous flaps, distraction osteogenesis, and the solution to flap failures. Closure of the oroantral/oronasal communication with placement of zygomatic implants after or during closure facilitates the prosthetic reconstruction. Thus, Prosthetic rehabilitation of atrophic maxilla and large maxillary defects can be done successfully by zygomatic implant-supported prosthesis. Moreover, it can correct serious oral dysfunction after pathologic ablation, infective debridement or avulsive trauma.

Aim

To maintain or improve the patient’s quality of life by trying to restore the lost form and function.

Conclusion

For zygomatic implant reconstruction, a team approach between the surgeon and the restorative dentist is paramount for treatment success. Evidences suggest that Zygo implant reconstruction of acquired maxillary defect is a safe, predictable and cost-effective treatment modality. Hence, the focus of this poster is to review the surgical and prosthetic aspects to successfully reconstruct acquired maxillary bony defects with zygomatic implants.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 398

Immediate Implant Placement With/Without Platelet Rich Fibrin in Fresh Extraction Sockets With Periapical Lesion

Dr. Ashish Panda

Himachal Institute of Dental Sciences, Himachal Pradesh

Abstract

The presence of periapical lesions while planning for a dental implant is limited because of its potential to not only contaminate the implant but also by loss of bone which may eventually compromise the primary stability and long term predictability. However, managing the periapical defects in the same sitting as with placement of implants minimize the number of surgical procedures by combining extraction, curettage pathologic periapical contents, implant placement in the single session resultantly saving time as well as cost. Since the resolution of periapical defect takes significant amount of time, using a growth factor concentrate like PRF can improve the healing process and also achieve healing of better quality as has been proved by literature. The purpose of this study was to evaluate the clinical outcome of implants immediately placed into fresh extraction sockets of teeth affected by chronic periapical pathologic findings, using platelet rich fibrin (PRF) as an adjunct during the surgical procedure. The study was carried out on 20 patients. Patients were assigned into two groups in which group A included 10 patients treated with PRF where as in group B, 10 patients treated without PRF. All the cases were evaluated and follow up was done in 1st week 1st, 3rd and 6th month.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 437

Socket Shield Technique and Immediate Implant Placement

Dr. Radhika Sharma

Institute of Dental Studies and Technology, Modinagar

Abstract

Healing of extraction socket leads to the dimensional changes which will affect the placement of the implant and its emergence profile. Atraumatic extraction, socket preservation technique, and immediate implant placement decrease the alveolar bone resorption by maintaining the postextraction socket. introduced socket-shield technique by keeping a buccal fragment of the tooth to prevent the buccal

cortical bone from resorption. Socket-shield technique was designed for implant placement to protect buccal bone and to get the proper esthetic form. Two millimeters buccal fragment of the tooth was kept attached and the implant was placed in contact with tooth fragment. Three-month follow-up shows proper healing, and healthy peri-implant tissue shows that socket-shield technique with immediate implant placement will be a good alternative to preserve buccal cortical plate and implant placement, especially in the esthetic area.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 446

Can a Tooth Preserve Its Bed?

Dr. Ziyauddin

RKDF Dental College and Research Center

Abstract

Background

Adequate bone volume is critical for proper dental implant placement, a solution for achieving sustainable and satisfactory functional and aesthetic outcomes. Tooth extraction is always followed by bone loss and socket preservation is carried out with autologous bone grafting of which donor site morbidity is a major drawback. An autologous dentin graft that is fabricated from root dentin has osteoinductive, osteoconductive and volume maintaining capacities due to its 10–30% mineral content after demineralization could be a viable alternative.

Aim

To evaluate the consolidation of autologous dentin graft and platelet rich fibrin (PRF) with native bone.

Methods

Fresh extraction sockets were grafted with a mixture of autologous dentin and PRF. Extracted teeth were sectioned to separate the crown and roots. The roots were morselized using a mortar and pestle to achieve a particle size of 300–1200 μm . Demineralization was carried out with basic alcohol to obtain final autologous dentin graft which was mixed with PRF and grafted in the extraction sockets. Pre and post-operative CBCT assessment of the sockets was done to examine consolidation of autologous dentin graft and PRF.

Result

In this study we found that there was consolidation of autologous dentin graft and PRF with native bone.

Conclusion

Autologous dentin graft with PRF can be used as an alternative to autologous bone graft. It is a viable and feasible grafting option for preservation of alveolar socket.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 476

Zygomatic Implant-Connecting Zygoma and Alveolus (Case Report)

Dr. Nitin Babu Jadhav

Y. M. T Dental College and Hospital

Abstract

The reconstruction of acquired maxillary bony defects after pathological ablation, infectious debridement, avulsive trauma or previously failed reconstruction is one most challenging areas in oral and maxillofacial reconstructive surgeries. The main goal of these reconstructive efforts is to maintain or improve the patients quality of life by trying to restore the lost form and function. Traditionally, these defects have been reconstructed according to their sizes, residual anatomic structure, patient medical condition and overall prognosis. Most of these technique have a common denominator of long treatment time frames, multiple surgical, donor site morbidity, high cost etc. Alternatively microvascular tissue transfer in combination with dental implants have become a popular way to restore these defect. Using zygomatic bone as anchorage, BRANEMARK developed the zygomatic implant as a solution to lack of maxillary bony support for prosthetic rehabilitation. Several investigators have reported their use a simple, predictable and cost effective solution to reconstruction of acquired maxillary bone defects.

References

1. Oral Maxillofacial Surg Clin N Am 25 (2013) 223–239.
2. Sorni Marco, Guarinos Juan et al. (2005) Implant rehabilitation of the atrophic upper jaw: a review of the literature since 1999. Med Oral Patol Oral Cir Bucal 10:E45–E56.
3. Misch CE (2007) Contemporary implant dentistry, 3rd edn. Mosby, St. Louis.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 540

Comparison of Autogenous Mandibular Ascending Ramal Versus Symphyseal Block Bone Graft for Augmentation of Resorbed Alveolar Ridges Prior to Implant Placement: A Prospective in Vivo Study

Dr. Ishwarya

Sree Balaji Dental College and Hospital, Chennai.

Abstract**Introduction**

Autologous bone possesses osteoinductivity, osteoconductivity, and the property of osteogenesis, which are necessary for an ideal bone graft.

Aims and Objectives

To compare the ascending ramus and the mandibular symphysis donor sites for the alveolar ridge augmentation before implant placement. The objectives were to evaluate pre and post-surgically for the donor site morbidity, neurosensory changes, soft tissue changes, tooth vitality and root resorption; graft size and uptake at the recipient site, and comparison among both the groups.

Methodology

16 patients were equally divided into two groups. Group A was treated with symphysis grafts, while in group B, ascending ramus grafts were incorporated. The patients were evaluated for the above-mentioned objectives at postoperative weeks 1, 2, and at the end of months 1 and 6. Dental implants were placed after 6 months.

Results

The mean difference in the bone dimensions pre and post-operatively, between both the groups was found to be insignificant ($p = 0.911$). The mean VAS scores were significantly higher with symphysis ($p = 0.005$). 4 out of 8 (50%) patients developed neurosensory deficits in group A, while only 2 out of 8 (25%) developed the same group in group B, which was significant. ($p = 0.000$).

Conclusion

It was concluded that a larger graft size could be harvested in group A patients, but the post-operative uptake of the graft was similar, making both the groups' excellent sites for bone augmentation.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting**

Reg. Num.: 607

Assessment of Facial Bone Changes Following Placement of Dental Implants

Dr. Pranav Kurup

JSS Dental College and Hospital, Mysuru

Abstract**Background**

An immediate implant placement contributes to the preservation of existing osseous and gingival architecture thereby maintaining the alveolar contour. Socket grafting minimizes the resorptive process and promotes adequate healing. We present a study on 3D osseous volume assessment of alveolar ridge, inclusive of the intact facial bone wall thickness and height together with correctly driven implant positioning.

Aim

To assess the facial bony form changes following immediate placement using different implant systems

Objectives

- To study the 3D contour of the socket following immediate implant placement and normal healing.

- To study the influence of grafting material in maintaining the bony contour.
- To study the dimensional changes in the alveolar ridge during remodelling with different implant systems.

Methodology

- Prospective clinical study with 10 patients 3 groups each comprising of conventional, Basal implants and non-implant placement.
- Immediate implant placement using conventional active implants and basal implants with/without Bone grafting.
- Periodic assessment of Labial, lingual bone contour and 3D volume changes using CBCT done at 3rd and 6th month.

Results

Group I and II—minimal bone resorption and bone contour maintained. Comparing the results subjectively at interval of immediate placement, 3rd and 6th post operative month. Preservation by long term maintenance of bony contour of alveolar ridge.

Discussion

Alveolar dimension prior to tooth extraction determines available alveolar volume for implant placement following extraction. Initial osteoclastic activity decreased at 8 weeks. Osteoblastic activity remains high providing favorable conditions for regenerative procedure.

Conclusion

Immediate implant placement with graft placement offers a solution for preservation of the bone contour and soft tissue stability.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting**

Reg. Num.: 703

Bone Ring for Implants: A 3D Augmentation Technique

Dr. Aastha Moza

Meenakshi Ammal Dental College and Hospital, Chennai

Abstract

Implant in place of lost natural tooth represents one of the most significant advances in dentistry in recent years, but dimensional changes that occurs post extraction leads to difficulty in implant placement. In these conditions, horizontal and vertical alveolar bone augmentation should be performed to provide structural base of bone for supporting implants. But most of the augmentation procedures have less predictable result and longer treatment duration. So to overcome these drawbacks, a new technique called “Bone ring transplant technique” was proposed. This technique augments the alveolar bone three dimensionally with autologous “bone rings” harvested from symphysis and it allows for immediate implant placement in single stage procedure. In this poster-indications, contra indications, surgical technique, advantages, disadvantages and a review of this technique will be presented.

Keywords Alveolar bone defect, Bone ring transplant, Implant

References

1. Stevens MR, Emam HA, Alaily ME, Sharawy M. Implant bone rings. Onestage three-dimensional bone transplant technique: A case report. *J Oral Implantol.* 2010;36:69–74.
2. Tekin U, Kocyigit DI, Sahin V. Symphyseal bone cylinders tapping with the dental implant into insufficiency bone situated esthetic area at one-stage surgery: a case report and the description of the new technique. *J Oral Implantol.* 2011;37:589–94.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.:** 714**Vertical Augmentation of Alveolar Ridge Using Sandwich Osteotomy with Simultaneous Implant Placement***Dr. Giri Kavya Swetha**Government Dental College and Hospital, Vijayawada***Abstract**

Dental implants are a reliable treatment option for restoring oral function in edentulous and partially edentulous patients. A three dimensionally favorable alveolar bone crest is required for successful implant-prosthetic rehabilitation both aesthetically and functionally. Alveolar ridge deficiency has become extremely challenging and is considered a major limitation for successful implant placement as well as for long term success rate. Several surgical procedures have been advocated for bone augmentation of the atrophic ridge and sandwich osteotomy is one of those techniques. This procedure is characterized by mobilizing an osteotomized bone segment in a coronal direction stabilized with implants, preserving the integrity and vascularization of the caudal fragment guaranteed by the periosteal vessels. This e-poster elaborates on the management of patients with localized vertical bone defects using alveolar sandwich osteotomy with simultaneous implant placement.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.:** 884**Comparison of Bone Regeneration in Extraction Socket Using Autologous Platelet Rich Fibrin Gel with Demineralised Freeze Dried Bone Graft After 3rd Molar Removal***Dr. M. Nivedhini Priya**Ragas Dental College and Hospital***Abstract****Introduction**

Third molar extraction, like any other surgery has its own intraoperative and postoperative events. Healing in the third molar socket is by secondary intention. The realization of importance of optimum bone healing in third molar sockets have drawn attention of many researches in terms of use of different materials to promote or facilitate faster healing. In order to reduce alveolar bone dimensional changes, more than a few techniques aiming at enhancing the regeneration process in the extraction socket have been proposed and adopted. Platelet rich fibrin represents a new step in platelet gel therapeutic concept with simplified processing minus artificial biomechanical modification, unlike other platelet concentrates.

Material and Methods

Twenty patients with near similar difficulty of bilateral mandibular impactions were selected for the study and were divided into two groups, wherein one socket was filled with PRF derived from patients own blood and the other socket was filled with demineralised freeze dried bone graft.

Results

From the above study, it was found that platelet rich fibrin is a suitable alternative to demineralised freeze dried bone allograft as platelet rich fibrin has simplified processing minus the hypersensitive reaction associated with demineralised freeze dried bone graft.

Discussion

PRF is a matrix of autologous fibrin, in which are embedded a large quantity of platelets and leukocyte cytokines during centrifugation. The intrinsic incorporation of cytokines within the fibrin mesh, allows for their progressive release over time (7–11 days), as the network of fibrin disintegrates. Demineralized bone allograft matrix is commonly used as a bone graft substitute, either alone or to supplement an osteoconductive material, because of its osteoinductive properties. PRFM may represent a simple and effective means of accelerating new bone growth in a variety of oral and dental applications without the disadvantages of barrier membranes.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.:** 921**A Digital Road Map for Predictable Results in Implantology***Dr. Rahber Firdous**P. M. Nadagouda Memorial Dental College and Hospital Bagalkot***Abstract****Aim**

The aim of this poster is to present a thorough insight about digitalised guided surgery system used in treatment planning and placement of implants.

Material and Method

System begins with digital impression. Digital impression refers to the scanned image, which will be obtained using an intra-oral scanner inside the mouth, with computer-aided, template-guided flapless implant surgery, the 3D Diagnosis data software can be used to plan

the correct implant position and to transfer the project to the surgical environment, allowing the correct realization of a surgical stent.

Background

The growing interest in dental implant surgery for edentulous patients, have led to the development of a software capable of planning and processing a surgical guide and prosthesis that can be placed immediately after implant insertion. With conventional implant placement, complications are often inadvertent sequelae of improper diagnosis, treatment planning, surgical method, and placement. These limitations can be overcome by using computed tomography, 3D implant planning software, image guided template production techniques, and computer aided surgery.

Result

Computer-assisted or guided implantology has been founded to overcome the conventional errors and computer guided imaging, which has added greatly to the success of implants (overcoming the conventional methodology).

Conclusion

The digitalised guided surgery for implants is an alternative for traditional analogue system for implants as it results in better planning and positioning of implant, reduced operative time with better accuracy.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 1033

“Spread, Don’t Split”: Microsaw Assisted Ridge Expansion for Implant Placement: Clinical Study of 30 Cases

Dr. Raghunandan P. Kamate

M. R. Ambedkar Dental College and Hospital Bangalore

Abstract

Introduction

Dental implants are the most modern and efficient treatment options available for the rehabilitation of occlusion for edentulous patients. In the present, the focus is on the treatment procedures, which provides more patient convenience and cost effective.

Aim

This study aims to discuss the Outcome of Ridge expansion technique using microsaw in horizontally deficient edentulous region of maxilla and mandible followed by implant placement without using bone graft materials.

Methodology

The study was conducted at our institution on 30 patients (42 implants), with a crestal width of at least 3 mm and apico-coronal height of at least 12 mm from major anatomical structures.

Results

Out of 42 implants (18 maxilla and 24 mandible) placed, the mean pre operative buccolingual width was 3.99 ± 0.52 and immediate post operative buccolingual width was 7.59 ± 0.41 . The different in bone width was found to be significant $p = 0.002$ ($p \leq 0.005$).

Conclusion

Using microsaw to expand the ridge is the precise method for augmentation with minimum discomfort to the patient and less treatment duration. Moreover, this approach is devoid of foreign materials usage and has a low rate cost, therefore, could be employed more often.

References

1. I. Kumar et al “Implant placement in conjunction with ridge split and expansion technique”. The British Association of Oral Surgeons (2019).
2. T Starch-Jensen. Ridge Expansion by Osseodensification Simultaneously With Implant Placement in Narrow Alveolar Ridges. JOMR (2019).

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 1035

Current Concepts in Immediate Loading of Dental Implants

Dr. Muthalagappan P. L.

Government Dental College and Hospital Vijayawada

Abstract

The introduction of osseointegrated implants has revolutionized the art and science of molecular dentistry giving a new lease of life to restorative aspects in day to day practice. Obtaining of a satisfactory osseointegration is an expected principle after the surgical placement of dental implants. The original surgical protocol established by Branemark consisted of submerging on implant post placement and maintain a non loaded implant environment for 4–6 weeks. During this Healing period, fully or partially edentulous patients had to avoid the use of dentures for 2 weeks post surgery and spend prolonged time with interim denture. Patient desire to shorter the treatment period and to avoid an edentulous condition encourage the introduction of an immediate loading period. Immediate implant loading can be briefly defined as the loading of a dental implant immediately or few hours after being placed. Immediate loading of implants has gained popularity due to less tissue trauma, reduced overall treatment time, decreased patient anxiety and discomfort, high patient acceptance and better function and aesthetics. Hence the purpose of this review is to provide rationale for immediate implant loading, analyze current available literature and factors influencing this treatment method along with a case report.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.: 1039****Partial Extraction Therapy: A Novel Approach for Preservation of Alveolar Bone in Immediate Implant Placement***Dr. Ravi S.**AL Ameen Dental College and Hospital***Abstract**

Socket preservation is the primary undertaking for clinician especially in immediate extracted socket. Partial root retention or socket shield technique (SST) has shown predictable results for avoiding alveolar ridge resorption. In this poster we're presenting a case record with review of literature touching on partial extraction therapy.

Aim

Clinical studies have suggested that keeping roots of unrestorable tooth may avoid tissue changes after tooth extraction. Therefore, the goal of this partial extraction therapy is to evaluate a partial root retention (SST) in combination with immediate implant placement beneath pontic sites.

Background

Immediate implant placement is a popular treatment modality of present-day implant dentistry. The principal undertaking for the clinician has been the preservation of the residual alveolar bone and prevention of its resorption following the removal of tooth in esthetic zone. Various surgical procedures such as GBR have been recommended to preserve alveolar ridge which is time consuming and staged approach. Partial extraction technique has been convenient and predictable technique for avoiding alveolar ridge resorption.

Clinical Significance

The purpose of the study report is to provide general review about partial extraction therapy and case reports present a replacement of various unrestorable tooth by using the SST, resulting in a predictable, high esthetic, and functional result.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.: 1061****Transcrestal Sinus Lift for Implant Placement: An Overview of Different Techniques***Dr. Ankit Dupare**Rungta College of Dental Sciences, Bhilai***Abstract**

Pneumatization and close proximity of the crestal bone to the maxillary sinus poses a great challenge for implant placement in the posterior maxilla. To overcome these limitations, the sinus lift procedure has been invented in the mid-1970s. Indirect/transcrestal sinus lift was first described by Dr. Tatum Jr. and modified by Summers, who introduced the osteotome sinus floor elevation approach. There onwards, several techniques and procedures were introduced into the implant dentistry to make the procedure simpler and less invasive with rationale behind all the techniques being the elevation of the sinus membrane to create a sub-antral space for increasing the vertical bone height. These techniques include osteotome sinus lift, Sinus balloon lift, Reamer mediated sinus lift, endoscopically controlled sinus lift, Sinus lift implant device, intralift, ossodensification burs, minimally invasive transcrestal approaches etc. Thus various modifications to the original techniques have been reported to improve the reliability and safety of the membrane elevation making sinus augmentation with simultaneous implant placement in the posterior maxilla region feasible.

References

1. Aruna Wimalarathna. Indirect Sinus Lift: An Overview of Different Techniques. *Biomed J Sci & Tech Res* 33(4) 2021.
2. Indirect sinus lift techniques: A literature review Nalluri Sathvik, et al. *jpr solutions.info* ISSN:0975–7619.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.: 1085****Immediate Implant Placement in the Anterior Maxilla***Dr. Satrasala Lakshmi Chandana**Government Dental College, Kadapa***Abstract**

Traditionally the implant is placed in the edentulous region. If the patient presents with a failing tooth, traditionally the socket is allowed to heal for 3–6 months before implant placement which results in vertical and horizontal bone loss. With the current advancement in technologies and the instrumentations implant can be placed in the socket immediately after the tooth extraction. This technique has a number of proposed advantages such as preservation of alveolar bone height and width and soft tissue, positioning of keratinised gingiva, decreased total treatment time, reduced number of surgical procedures, reduced overall cost, and better patient acceptance. This poster illustrates immediate implant placement followed by extraction in the anterior maxilla establishing good aesthetic outcome and good preservation of bone.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.: 1099****Robotics in Dental Implantology***Dr. Gopalakrishnan**Ragas Dental College and Hospital***Abstract****Introduction**

Robotics, is the study of robots and the current robotic technology has increased its abilities such as precision, sensing, repeatability and controls which makes it more suitable in the field of medicine and surgery.

Aims/Objectives

It is broadly classified into Robot-assisted implantology and fully autonomous implant robots. A robot guided implantology increases accuracy and aesthetics in dental implant procedures through visual and physical guidance and a simple digital workflow. A fully-autonomous implant robot on the other hand is independent under the supervision of a dentist.

Methods

A robot had three basic components—sensors, effectors and control systems, sensors (microphones, buttons, cameras etc.) help robots gather information about the environment to guide its actions. An effector of the robot is the one that actually does the work (helping a surgeon pick a surgical knife). Control system (the brains of the robot) determines the behavior of the robot. In a clinical study of 102 patients involving 250 patients in armed forces dental clinic in Germany, the patients were treated with a system that allows transfer of virtual planning of implant positions using CBCT to surgical guide template. The results concluded that in all cases critical anatomical structures were protected and no complications were detected in postoperative radiographs.

Results and Conclusion

Robotic guided implantology is more advanced from a technology maturity stand-point. The dentist is still in control of the process and it minimizes patient's burden. Fully-autonomous Robotic implantology has sure gained interest but the technology is still in its infancy and it is expected to stay that way for the foreseeable future.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.: 1197****Immediate Implant Placement Using Piezosurgery Assisted Ridge Split Technique: Case Report***Dr. Rahul Sharma**PMNM Dental College and Hospital, Bagalkot***Abstract**

The treatment of patients with atrophic ridge who need prosthetic rehabilitation is a common problem in oral and maxillofacial surgery. Among the various techniques introduced for the expansion of alveolar ridges with a horizontal bone deficit is the alveolar ridge split technique. Ridge splitting is a minimally invasive technique indicated for narrow alveolar ridges (< 4 mm width) with adequate height, which enables immediate implant placement and eliminates morbidity and overall treatment time. The classical approach of the technique involves splitting the alveolar ridge into 2 parts with use of osteotomes and chisels. Modifications of this technique include the use of rotating instrument, screw spreaders, horizontal spreaders and piezoelectric surgical units. A two-case reports with severe atrophic residual alveolar ridge with inadequate horizontal width and adequate vertical height is presented here. In this case Osteotomy cuts were given using piezoelectric tips with immediate implant placement. Thus, Piezoelectric surgery assisted Ridge Split technique is a very predictable procedure that can achieve substantial gains in horizontal ridge width of the edentulous maxilla and mandible without associated morbidity.

References

1. Blus C, Szmukler-Moncler S. Split-crest and immediate implant placement with ultra-sonic bone surgery: a 3-year life-table analysis with 230 treated sites. *Clin. Oral Impl. Res.* 17,2006;700–707.
2. Mauro Labanca, Flavio Azzola, Raffaele Vinci, Luigi F. Rodella. Piezoelectric surgery: Twenty years of use. *Br J Oral Maxillofac Surg* 46(2008) 265–269.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.: 1201****Indirect Sinus Lift Procedure: A Saviour for Absorbed Maxilla***Dr. Jayamithran Shaji**Rajas Dental College and Hospital***Abstract**

An indirect sinus lift is a procedure to lift the augmented/regenerated alveolar bone in an atrophied residual maxillary posterior alveolar crest. The anatomical structure of the maxillary sinus almost makes every dental implant surgery a challenging task; placement of implant in the chronic atrophic maxilla; difficulty in osseointegration and further functional and esthetic problems in implant-supported. Lack of sufficient bone height along the maxillary sinus poses significant difficulty for placement of an implant. A minimally invasive sinus augmentation is an effective solution for this problem. The indirect sinus lift/crestal osteotome technique was first described by Summers in 1994 as a less invasive technique for raising the sinus floor through compression of the bone apically towards the sinus, and lifting of the Schneiderian membrane. He modified this technique with the addition of bone graft particles into the osteotomy. Although adequate bone height can be achieved using various maxillary sinus techniques and also practiced successfully, complications such as perforation or

tearing of the sinus is of concern. Newer techniques like nasal suction technique, balloon antral elevation technique, and Hydraulic Sinus Lift technique emerge as more favorable among all these and can efficiently lift the Schneiderian membrane with minimal trauma. We must emphasize that these are new techniques and cannot replace conventional techniques as a whole. In this poster, we will review the steps in indirect sinus lift procedure, its indication, contraindication with recent advances.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 1233

Direct vs Indirect Sinus Lift

Dr. Alpha Mary Mathew

K. V. G. Dental College

Abstract

Introduction

Dental implants are used to replace both the form and function of missing teeth. The placement of endosseous implants in posterior edentulous maxilla is normally a challenging task in implant dentistry due to presence of maxillary sinus and especially in cases of geriatric patient due to maxillary sinus pneumatization. To increase the amount of bone in the posterior maxilla, the sinus lift procedure, or subantral augmentation, has been developed. In 1970s, Hilt Tatum used maxillary sinus cavity to increase available bone using graft material, which allowed greater implant to bone contact area once the bone graft matured. Direct and indirect sinus lift techniques have become of greater importance over time in cases of atrophied posterior maxilla.

Aim

The purpose of this poster is to depict the indication and techniques used for maxillary sinus elevation and augmentation.

Material and Method

Full text of potentially relevant studies was retrieved and reviewed.

Conclusion

Pneumatization of the maxillary sinus secondary to posterior maxillary tooth loss prevents implant placement in this region. Elevation and augmentation of maxillary sinus provides predictable outcome of regenerating lost osseous structure in the posterior maxilla. Sinus lift procedures provide long term success at implant sites.

Keywords Implants, Direct Sinus lift, Indirect Sinus lift

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 1237

Evaluation of Outcome of Alveolar Socket Preservation with Bio-OSS and PRF, Followed by Delayed Implant Placement: A Prospective Study

Dr. Abhijeet Bhandari

Sardar Patel Post Graduate Institute of Dental and Medical Sciences

Abstract

To assess and evaluate the outcome of alveolar sockets by placing Bio-OSS with platelet rich fibrin post extraction; followed by delayed endosseous dental implant placement.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 1278

Indirect Sinus Lift Techniques

Dr. Shruthi R.

Ragas Dental College and Hospital

Abstract

The maxillary sinus, largest of paranasal sinuses is pyramidal in shape with its base parallel to lateral nasal wall and apex pointing towards zygoma. In the rehabilitation of atrophic posterior maxilla, factors such as age and extraction of teeth result in loss of alveolar bone height together with increased pneumatization of sinus contradicting the implant surgery. Traditionally, two techniques are employed, namely, the direct sinus elevation procedure using a lateral window approach and the indirect sinus elevation procedure using a crestal approach. The lateral window approach has been reported to yield predictably favorable clinical results. Nonetheless, the degree of invasiveness and patient morbidity, risk of severing the alveolar antral artery, risk of perforating the sinus membrane, delay in healing, and increased risk of postsurgical infection are major drawbacks of this procedure. This poster outlines of the indirect sinus lifting for the purpose of placing dental implants.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.: 1300****Adopting Autogenous Partially Demineralised Dentin Matrix Processed Immediately After Extraction For Alveolar Bone Regeneration in Implant Dentistry***Dr. Rajvi Desai**Faculty of Dental Science, Nadiad***Abstract**

In implant dentistry, bone augmentation is necessary when there is lack of sufficient bone volume. Of all the various materials, autogenous bone is of “gold standard” because of their osteogenic property. However the drawback of autogenous bone as grafting material are that the harvested bone quantity is confined, resorption is unavoidable and donor site morbidity is instigated. The demineralized dentin matrix (DDM) is found to be of excellent option because of their osteoinductive and osteoconductive properties. They present components similar to natural bone and act as a scaffold in releasing BMP (Bone Morphogenic Protein). The autogenous partially demineralized dentin matrix (APDDM) has shown to have superior properties relative to those of unmineralized and completely DDM. Herein my poster explains about the procedure and the efficacy of APDDM prepared onsite for alveolar bone regeneration in implant dentistry.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.: 1318****Comparative Evaluation of the Marginal Bone Loss in One-Stage Versus Two-Stage Implant Placement: A Prospective Study***Dr. Josephine Shamira**Ragas Dental College***Abstract****Background**

Dental implants have changed the face of dentistry. The surgical approaches in implant placement are one stage and two stage technique. The main purpose of implant placement being preservation of peri-implant tissue in long term at the extraction site. In two stage procedure, fixtures are submerged under the mucosa allowing stress free healing period and the abutments are connected and remained exposed to the oral environment. In first stage the implant is placed and the soft tissue flap is placed around coronal portion of healing

abutment. The minimum rate of bone loss around the fixture being important criteria for evaluation of implant treatment success.

Objective

To evaluate and compare the changes in the marginal bone level in one stage versus two stage implant placement procedure.

Methodology

Subjects of age group 18–60 years with edentulous area reporting to the department of oral and maxillofacial surgery, the Oxford Dental College, Bangalore were chosen. 10 implants in one stage and 10 implants in two stage were placed after randomization. In a single stage procedure healing abutments were placed above the mucosa. In two stage procedure the cover screw of the implant was placed after implant placement and were sutured underneath the mucosa. After healing period was complete, the healing abutment was placed in second stage. Delayed loading was done for implants in both groups.

Results

No significant differences observed between two groups respect to marginal bone loss at the time interval of 1,3 and 6 months respectively.

Conclusion

Reduction in the marginal bone levels in both groups were in acceptable range. Hence we successfully use one stage implant over two stage implant procedure.

References

1. Gheisari R, Eatemadi H, Alavian A. Comparison of the marginal bone loss in one-stage versus two-stage implant surgery. *Journal of Dentistry*. 2017 Dec;18(4):272.
2. Juzikis E, Rusilas H. Immediate Vs conventional loading of implants in edentulous patients—a comparison. *Journal of contemporary medicine and dentistry*. Adilabad: Mahatma Printing Press, 2017, vol. 5, no. 3. 2017.

Category: Student: E-Poster**Theme: Dental Implantology, Pre-Implant Surgery and Grafting****Reg. Num.: 1322****Changing Trends of Bone Grafts in Oral Implantology***Dr. Kamini Sharma**The Oxford Dental College, Bommanahalli, Bangalore, 560068***Abstract**

Dental implants are the advancing way for rehabilitation of edentulism. Healthy and adequate alveolar bone is a prerequisite for the survival of implants. Sometimes it is necessary to augment the alveolar ridges with bone grafts when implants are placed. Bone grafts play an important role in restoring and preserving form and function. Osteoinduction, osteogenesis, intact vascular supply and osteoconduction are essential for favourable bone regeneration. Grafts can be autogenous or allogeneous. Blood components, gene therapy and recombinant proteins also facilitate bone formation. Alveolar bone augmentation can be done by autogenous bone graft, allogeneic grafts, GBR (Guided Bone Regeneration), RSPs (Ridge Splitting Procedures), sandwich osteotomy, DO (Alveolar Distraction Osteogenesis) etc. Recently tissue engineering has gained more importance

in bone regeneration. Stem cell therapy is an innovative technique and its use has shown superior quality of bone formation. MSCs (Mesenchymal Stem Cells) are considered as “platinum standard” in bone regeneration. In our institution bone grafts like NOVABONE, OSSEOGRAFT DMBM (Demineralized bone matrix) are being used, that has shown adequate bone regeneration. Our experience with stem cells in osseous regeneration in a large keratocyst lesion has encouraged us to explore the changing trends of bone grafts in oral implantology.

References

1. Doonquah L, Holmes PJ, Ranganathan LK, Robertson H. Bone Grafting for Implant Surgery. *Oral and Maxillofacial Surgery Clinics*. 2021 May 1;33(2):211–29.
2. Egado-Moreno S, Valls-Roca-Umbert J, Céspedes-Sánchez JM, López-López J, Velasco-Ortega E. Clinical Efficacy of Mesenchymal Stem Cells in Bone Regeneration in Oral Implantology. Systematic Review and Meta-Analysis. *International Journal of Environmental Research and Public Health*. 2021 Jan;18(3):894.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 1330

Emergence of a Contemporary Modus Operandi in Replacement of Dento-Alveolar Defects

Dr. Chandhana A. V.

The Oxford Dental College, Bommanahalli, Bangalore, 560068

Abstract

Personalized medicine defines it as “a form of medicine that uses information about a person’s gene, proteins, and environment to prevent, diagnose, and treat disease. It refers to shift away from the “one-size-fits-all” approach designed for average patient toward treatments tailored for the individual. The development of CAD/CAM technology have allowed the application of personalized medicine to oral and maxillofacial surgery in order to improve outcomes. Patient-specific implants are currently used in multiple areas of oral and maxillofacial surgery, including temporomandibular joint replacement, reconstruction of the maxillofacial skeleton, orthognathic surgery, post traumatic dentoalveolar defects. There are many challenges unique to bony reconstruction of the maxillofacial skeleton, including anatomic diversity, complex movement of the mandible, saliva contamination, and dental rehabilitation. A major advancement to patient-specific implants is the rapid prototyping of stereo lithic models. The decreasing cost of technology has also made it more affordable and accessible to patients. Fabrication of custom prosthesis begins with sending the DICOM data of the preoperative CT scan to virtual surgical planning company for 3D planning. The 3D printed models can be used to adapt the patient specific implant for the particular defect before surgery. This technique allowed accurate adaptation of the prosthesis to the patient’s anatomy without the patient being under anesthesia. Advances in technology with

decreasing costs will continue to allow this field to improve accuracy, efficiency, and overall outcome of patient specific implant.

Category: Student: E-Poster

Theme: Dental Implantology, Pre-Implant Surgery and Grafting

Reg. Num.: 1388

Anatomic Variations in the Extra-Cranial Part of the Facial Nerve in the Indian Population: A Clinico-Cadaveric Study

Dr. Abhijith S. M.

Manipal College of Dental Sciences, Manipal

Abstract

The extra-temporal part of the facial nerve is intimately related to the parotid gland. The aim of the study is to:

1. Study the branching pattern of the extra temporal part of the facial nerve in the Indian population, by cadaveric dissection and clinical cases of parotidectomy.
2. Study the distances of the facial nerve trunk from three key landmarks—Posterior belly of digastric, Tympanomastoid fissure, Tragal pointer.
3. To record the distance of the marginal mandibular nerve from the lower border of mandible just anterior to the gonial angle.

7 patients diagnosed with parotid gland pathologies and 7 patients with history of trauma or lesions affecting the submandibular region requiring a submandibular approach were selected for surgical intervention. 13 facial halves were dissected on cadavers. The facial nerve was located by anterograde approach. The distance of individual landmarks from the facial nerve trunk was measured by slide calipers. Our study concludes that the posterior belly of digastric is a relevant and consistent pointer for locating the facial nerve trunk and the distance of the marginal mandibular nerve from the lower border of mandible varies to a certain extent with the position of the head. Knowledge about branching pattern and surrounding structures is of paramount importance in the successful identification and preservation of the facial nerve trunk and its branches during surgeries of the region.

References

1. Saha S et al. Identification of facial nerve during parotidectomy: a combined anatomical & surgical study. *Indian J Otolaryngol Head Neck Surg*. 2014;66(1):63–68.
2. Davis RA et al. Surgical anatomy of the facial nerve and parotid gland as based upon a study of 350 cervicofacial halves. *Surg Gynecol Obstet*. 1956;102:385–413.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.: 315****Physics Forceps And Conventional Forceps for Dental Extractions: A Comparative Study***Dr. Shivakumar L.**Dr. R. Ahmed Dental College and Hospital***Abstract****Introduction**

The extraction of teeth is the most common procedure carried out in oral surgery clinics. Several newer instruments, techniques for extraction were developed over a period of time to minimise the trauma to paradental tissues, such as easy x-trac system, piezosurgery, Periostomes, Physics Forceps, Benex extractor, and many others. Of the various tools available, physics forceps were chosen in this study because of its biomechanical design, that helps to reduce the trauma and there by facilitating proper prosthetic rehabilitation.

Aim

The study aimed to evaluate the efficacy of physics forceps for atraumatic dental extractions.

Objectives

Objectives of the study is to evaluate the time taken for extraction, gingival laceration, buccal cortical plate fracture, tooth/root fracture and postoperative pain (no. of analgesics taken).

Methods

A randomized prospective comparative clinical study was done in 100 patients who were randomly categorized into two groups.

Results

Statistically significant reduction in operating time, minimal gingival laceration and reduced postoperative pain is noted in physics forceps group.

Conclusion

The results of the present study suggest that physics forceps was more efficient in reducing operating time with prevention of marginal bone and minimal gingival laceration.

References

1. Kunal pilare, Physics forceps—a new revolution in exodontia. International Journal of Current Research 2017, Vol. 9, pp. 51218–51220.
2. Harsh S Patel, etal. Comparative Evaluation of Efficacy of Physics Forceps versus Conventional Forceps in Orthodontic Extractions: A Prospective Randomized Split Mouth Study. Journal of Clinical and Diagnostic Research. 2016 Jul, Vol-10(7): ZC41–ZC45.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.: 424****Oral Vitamin B12 vs Intra Nasal Vitamin B12 in Transient Neurosensory Disturbances Following 3rd Molar Surgery: A Randomised Control Trial***Dr. Kolli Radha Sindhuja**Gitam Dental College and Hospital***Abstract****Purpose**

To assess the clinical effectiveness of intra nasal vitamin B12 spray versus oral B12 administration in recovery of transient neurosensory disturbances of lingual nerve following mandibular third molar surgery.

Methods

30 patients who reported with paraesthesia of the lower lip and lingual mucosa next day after undergoing mandibular third molar surgery were enrolled in this study. Patients were divided into two groups (Group 1—*intra nasal vitamin B12 spray* and Group 2—*Oral vitamin B12*) and B12 was delivered randomly and followed up the entire duration of the study. Clinical neurosensory tests were used before and after treatment, and the responses were compared.

Results

The study composed of 30 healthy patients) with transient lingual neurosensory disturbances (degree 1–17 and degree 2–13) following 3rd molar removal. It was found that 14 subjects (93.3%) out of 15, with maximum recovery on 16th post-operative day in *intra nasal B12 spray* group, where as in patient who took oral vitamin B12 tablets showed recovery in only 9 subjects (60%) out of 15 subjects with maximum recovery only by the end of 3 month follow up. it was also found that maximum duration for recovery following transient neurosensory disturbance was post-operative day 24 with *P* value of 0.009 irrespective of the type of intervention.

Conclusion

Intra-nasal vitamin B12 sprays were found to be conducive to treat transient neurosensory disturbances following third molar surgery. Further investigations are worthwhile regarding its routine application following neurosensory complications.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.: 458****Evaluation of Heart Rate and Blood Pressure Changes in Patients Undergoing Dental Extractions Using Different Concentrations of Vasoconstrictors***Dr. Jayanthi Lingaraj**Meenakshi Ammal Dental College*

Abstract

Lidocaine is the most commonly used local anesthetic and adrenaline is an excellent vasoconstrictor added to lidocaine. It has many advantages such as improvement in the duration and quality of anesthesia, reduction of blood loss throughout the operation, and reduction in the peak plasma concentration.

Objectives

This study aimed to evaluate the blood pressure and heart rate changes in patients undergoing dental extractions using different concentrations of vasoconstrictors in local anesthesia.

Material and Methods

A total of 150 patients were included in the study who were divided into three groups of 50 each, i.e. Group A (plain LA), Group B (1:80,000 adrenaline), and Group C (1:2,00,000 adrenaline). Parameters like heart rate and blood pressure were taken into consideration for all the cases, and they are observed in four different time intervals of the procedure.

Result

There is no statistical significance seen intragroup.

Conclusion

It was observed that in this study the various concentrations of adrenaline used in local anesthesia have no effect on blood pressure, but there is an increase in heart rate when 1:80,000 concentration of adrenaline is used.

Keywords Adrenaline

References

1. M.H.J. Hollander, J. Schortinghuis, A. Vissink. Changes in heart rate during third molar surgery. *Int. J. Oral Maxillofac. Surg.* 2016;45:1652–1657
2. Karm M., Kim M., Park F., Seo K. and Kim H., 2018. Comparative evaluation of the efficacy, safety, and hemostatic effect of 2% lidocaine with various concentrations of epinephrine. *Journal of Dental Anesthesia and Pain Medicine*, 18(3):122.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries**

Reg. Num.: 480

Is 0.75% Ropivacaine More Efficacious Than 2% Lignocaine with 1:80,000 Epinephrine for IANB in Surgical Extraction of Impacted Lower Third Molar?

Dr. B. Laxmi Reddy

Gitam Dental College and Hospital

Abstract**Purpose**

We aim to compare and evaluate the anesthetic efficacy and safety of IANB using 0.75% ropivacaine and 2% lignocaine with 1:80,000 epinephrine in lower impacted third molar (LI3M) surgery.

Patients and Method

We designed a prospective randomized, double-blind, split-mouth study evaluating 60 systemically healthy patients with the presence of bilateral symmetrically oriented LI3M. The sides and sequence of drug administered were randomly allocated. The primary outcome variables analyzed were hemodynamic stability, profoundness of

anesthesia, and duration of postoperative analgesia. Time of onset, duration of soft tissue anesthesia, patients requiring analgesics, and their quantity for five postoperative days were recorded.

Results

Early onset of anesthesia was seen in Lignocaine (68.6 ± 20.4 s) compared with Ropivacaine (104.1 ± 17.7 s) with significant differences ($p = 0.001$). Both the anesthetic solutions were found to be equipotent in providing profound intraoperative anesthesia. Ropivacaine exhibited statistically significant differences in the duration of soft tissue anesthesia ($p = 0.001$) and post-op analgesia ($p = 0.001$). Patients requiring rescue pain medication and the number of analgesics consumed were greater on first and during five post-op days in lignocaine when compared with that of ropivacaine with significant differences $p < 0.001$ and $p < 0.001$ respectively.

Conclusion

The results suggest that 0.75% ropivacaine is effective in providing adequate anesthesia, prolonged post-op analgesia, and better post-op pain control with a safer cardiovascular profile in LI3M surgery.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries**

Reg. Num.: 492

Different Types of Flap Designs In Surgical Removal of Impacted Third Molars

Dr. Shweta Murlidhar Patil

Sharad Pawar Dental College and Hospital, Sawangi (M)

Abstract

Third molar extraction is common minor oral surgical procedure, around 33% of patients in 90% of population have impacted third molars, which may be of different causes¹. Since there are different types of impacted teeth according to different classifications, different types of flaps also play major role in surgical removal of the impacted third molars. Selection of appropriate flap design based on type of impactions have many advantages in intra-operative and post-operative sequelae such as trismus, swelling, infection. The purpose of this e-poster is to know the different types of flap designs in surgical removal of the impacted third molars. Third molar surgery has been associated with variety of complications. Flap design is one of the factors influencing severity of these complications. The design of flaps used to expose impacted third molars has been the subject of textbooks and various articles in recent years. Several different flap techniques have been developed, compared, and discussed to improve the surgical access and minimizing potential intra-operative and post-operative complications. Each flap design has its own advantages and disadvantages. However we have great diversity of flap designs and we must personalize each case depending on characteristics of each impacted tooth and on the skill and preference of the surgeon¹.

Reference

1. Izquierdo Gómez K, González Navarro B, Arranz Obispo C, Jané Salas E. The Importance of Flap Design in Third Molar Surgery- A Systematic Review. *Biomedical Journal of Scientific & Technical Research*. 2018;11(5):8798–803.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.:** 530**Effectiveness of Alpha Lipoic Acid on Post Operative Sequelae in Lower Third Molar Surgery***Dr. Mena C.**Coorg Institute of Dental Sciences***Abstract****Introduction**

Alpha-lipoic acid (ALA) is a compound found naturally inside every cell of the human body. ALA has powerful antioxidant effects that are thought to have benefits for our health. When looking at data from clinical trials, ALA has revealed to be efficient in particular diseases and conditions, including diabetic neuropathy, obesity, schizophrenia, MS, abnormalities in pregnancy and organ transplantation, with no or minor adverse effects. Here in this poster we are going to check the effectiveness of alpha lipoic acid in third molar surgery.

Aim

To check the effectiveness of alpha lipoic acid in comparison with corticosteroids in swelling and postoperative healing on patients undergoing third molar surgery.

Materials and Methods

The total number of participants in this study is 40 undergoing third molar impaction surgery (Class 1, 2, position A, B–Mesio angular impaction) of third molar. Test Group is 20 patients subjected with 300 Mg of ALA for 7 days. Control Group is 20 patients given 5 mg wysolone for 3 days.

Results

Out of 40 patients, the group which use alpha lipoic acid has good wound healing and less post operative inflammation when compared to the patient who uses corticosteroids.

Conclusion

It can be concluded that steroids can be beneficial but have serious side effects. It's a good idea to understand the risks of corticosteroids and replace with alpha lipoic acid which prevents inflammation and promotes wound healing.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.:** 538**Intra-Alveolar Local Versus Systemic Nsaids for Post-Operative Pain Management In Patients Undergoing 3rd Molar Surgery: A Novel Comparative Study***Dr. A. Vedha Vivigdha**Saveetha Dental College and Hospital***Abstract****Aim**

To compare the efficacy of intra alveolar ketorolac dispersion form with zerodol sp oral route in post surgical pain management of patients undergoing 3rd molar surgery.

Material and Methods

A total of 20 patients enrolled in the trial with impacted mandibular third molars, after taking their informed consent. Patients were randomly selected and divided into 2 groups. In group 1 (n = 10), ketorolac 10 mg tablet was dispersed in saline packed into surgical extraction socket with a saturated gelatin sponge dressing and sutured. In group 2 (n = 10), extraction socket was packed with abgel and sutured. Postoperatively, patients were asked to wait until the onset of pain and then start taking the analgesic as prescribed (aceclofenac + serrotopeptidase + paracetamol). The intensity of patient's pain levels were assessed at preoperatively, Postoperatively 1st, 6th hour and 24 h using visual analogue pain scale. Time at which the first rescue analgesic was consumed and the number of analgesics in 24 h were also recorded. Other parameter were mouth opening, duration of surgery.

Results

Reduction of immediate postoperative pain was statistically significant ($P = 0.005$) in group 1 when compared to group 2. No difference was determined between groups in mouth opening and duration of surgery.

Conclusion

The results of this study showed that ketorol DT can produce an immediate analgesic action in post extraction sockets after surgical extraction of impacted teeth thereby ensuring a comfortable postoperative recovery.

Keywords Intra alveolar, NSAIDS, Analgesia, Adverse effects, Third molar surgery, Ketorol DT.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.:** 611**Healing Oxygen Therapy in Third Molar Surgery: Its All About Oxygen***Dr. Killampalli Y. V. Satyanarayana, Dr. Srinidhi K.**Saveetha Dental College and Hospital***Abstract****Aim**

The aim of this prospective study is to assess the feasibility and efficacy of Blue[®] m oral gel local Active oxygen technology in reducing postoperative complications such as pain and swelling after surgical extraction of impacted lower third molar.

Patients and Methods

This study is conducted in patients (sample size—20) attending the Department of Oral and Maxillofacial Surgery, Panineeya Mahavidyalaya Institute of Dental Sciences and Research Centre, who require surgical removal of impacted lower third molars with similar difficulty index under local anaesthesia.

Methodology of Assessment

Postoperative pain was assessed using Visual Analogue Scale 4 h post operatively, 2nd and 7th postoperative day. Postoperative edema was

assessed using physical method by measuring preoperative and postoperative distance between corner of mouth and the centre of tragus of ear; angle of mandible (gonion) and lateral canthus of eye measured preoperatively, on 2nd and 7th day to quantify facial swelling. Post operative soft tissue healing response was noted using Landry Healing Index on 7th post operative day.

Results

This study clearly indicated that Incorporation of active oxygen (blue[®] m) gel within extraction sockets of impacted third molars proved to be beneficial for patients with less post operative pain 4 h postoperatively, on 2nd and 7th day, less postoperative swelling on 2nd and 7th day and also Postoperative wound healing was very good.

Conclusion

This study concluded that topical application of Blue[®] m oral gel in the third molar extraction sockets is proved to be highly beneficial.

Category: Student: E-Poster

Theme: Dentoalveolar Surgery/Nerve Injuries

Reg. Num.: 630

Comparison of Efficacy of 2% Ropivacaine with 0.5% Bupivacaine for Pain Control During Therapeutic Dental Extractions

Dr. Dadi Chandana Sowjanya

Panineeya Dental College

Abstract

Background

Dental extractions are often painful mandating the use of post operative analgesics. To circumvent this problem higher doses of a single drug may have to be used which can have potential side effects. Use of long acting local anaesthetics may help us circumvent these problems after extractions.

Aim

Comparison of efficacy of 2% ropivacaine with 0.5% Bupivacaine for pain control during therapeutic dental extractions.

Methodology

Prospective double blinded randomized control trial including all the patients undergoing therapeutic extraction of maxillary premolars prior to orthodontic correction the sample will be divided randomly into three groups.

- Group A: Patients receiving 2% Xylocaine without adrenaline.
- Group B: Patients receiving 2% Ropivacaine without adrenaline.
- Group C: Patients receiving 0.5% Bupivacaine without adrenaline.

All the patients were given Middle Superior alveolar nerve block with 1.8 ml of the foresaid anesthetics.

1. VAS score for pain evaluation of pain during injection and upto 6 h.
2. Time of Onset of action.
3. Time of rescue pain medication.
4. Need for palatal anesthesia.
5. Need of additional Injections (After the primary block).

Results

The onset of action of ropivacaine (mean = 3.22 min) is lesser than bupivacaine (mean = 4.74 min). Need for palatal anaesthesia, additional buccal injection and rescue medication is same for both. Bleeding is same for both the anaesthetic agents. Pain after 6 h is slightly lesser in case of bupivacaine.

Conclusion

This study shows that ropivacaine is a potential maxillary anaesthetic in comparison with bupivacaine there is no significant advantage except for lesser onset of action. Our study concluded that both 0.2% Ropivacaine and 0.5% Bupivacaine are potent anaesthetics which can be used for pain control in maxillary therapeutic extractions as an alternative to conventional anaesthetics.

Category: Student: E-Poster

Theme: Dentoalveolar Surgery/Nerve Injuries

Reg. Num.: 930

A Comparative Study of Buccally Based Triangular Flap Versus Lingually Based Triangular Flap Design in Third Molar Surgery

Dr. Rituparna Mitra

SRM Dental College, Chennai

Abstract

Introduction

In oral surgical procedures, it is desirable to place the mucoperiosteal incision on sound bone. Many flap designs used in impacted third molar surgery do not follow this rule, as they involve incisions that are placed on the extraction socket, resulting in a high incidence of mucosal dehiscence, followed by secondary wound healing.

Objectives

The aim of this study is to compare a linguallay based triangular flap design with the routinely used triangular flap design in the surgical removal of impacted mandibular third molars.

Methodology

This study is carried out as randomized study. The participants were divided into two groups. The participants in group A were treated with the buccally based triangular flap. The participants in group B were treated with linguallay based triangular flap. Participants were recalled on 2nd, 7th, 14th, and 21st day postoperative, and evaluated for the parameters of pain, facial swelling, mouth opening, wound dehiscence, dry socket.

Implication

These results show that this new flap design is preferable to the routinely used flap for impacted third molar surgery.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.: 993****Comparison Between Local Infiltration via Pressure Syringe and Inferior Alveolar Nerve Block Anesthesia for Extraction of Mandibular Premolars and Molars***Dr. Pandiyarajan P.**Tagore Dental College and Hospital***Abstract****Introduction**

Local anaesthesia plays a pivotal role in modern dentistry. Inferior alveolar nerve block provides enough anaesthesia to perform surgical procedures in a large area of the mandible. However there is high failure rate of 7–75%. An alternative technique which is simple in its application in combination with modern instruments that is pressure syringe and anaesthetic agents would be beneficial.

Methodology

The surgical procedure is performed under strictly sterile conditions. For the study participants allocated to the Group A, local anaesthesia 2% Lignocaine Hydrochloride with 1:80,000 adrenaline administered as Infiltration using pressure syringe. Submucosal injections (n = 4/ 0.5 mL) administered directly around the treatment area at the mesial and distal (lingual and vestibular) sites, respectively. Each injection given in the labial and lingual regions at an angle of 45° to the tooth's axis without bone contact. For the study participants allocated to the Group B, Local anaesthesia 2% Lignocaine Hydrochloride with 1:80,000 adrenaline administered as inferior alveolar nerve block using conventional syringe. Atraumatic extraction of the tooth in premolar and molar mandibular region performed under aseptic techniques.

Result

Local anaesthesia administered as Infiltration using pressure syringe is comfortable for the patients undergoing single mandibular premolar/molar tooth extraction.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.: 1008****Lingual Nerve... How to Preserve It?***Dr. Harivignesh S.**Tagore Dental College***Abstract**

Surgical removal of lower third molars is the most frequently carried out procedure in oral surgery. The lingual nerve is at risk of damage during mandibular third molar surgery. Damage to the lingual nerve

can result in loss of sensation to the ipsilateral anterior tongue and lingual mucoperiosteum. The lingual nerve is protected during third molar surgery by use of various retractors. This poster discuss about various methods in retraction and prevention of injury to the lingual nerve during third molar surgery.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.: 1037****Alveolar Distraction Osteogenesis: Think Beyond Grafting***Dr. B. Logeshwaran, Dr. Thiru Vikrama Narayan S.**Sri Venkateshwaraa Dental College***Abstract**

Defective residual alveolar ridges are the major drawback in the replacement of missing tooth. The alveolar bone is unique in that it exists for the sake of teeth it retains, when the teeth are absent, the bone slowly resorbs. Augmentation of the vertical height benefits in providing sufficient retention to the prosthesis. Alveolar distraction osteogenesis is an effective method for bone regeneration process. This involves gradual, controlled displacement of surgically created fractures. This process utilizes the body's own growth mechanism and it results in simultaneous expansion of soft tissue and bone volume. The aim of this presentation is to provide an overview of the mechanism, procedure, advantages and disadvantages of alveolar distraction osteogenesis.

Keywords Defective ridges, Distraction osteogenesis, Pre prosthetic

References

1. Ole T. Jensen, Michael Block., Alveolar Modification by Distraction Osteogenesis, Atlas of Oral and Maxillo facial Surgery Clinics (2008).
2. Hussam S. Batal, David A. Cottrell., Alveolar distraction osteogenesis for implant site development, Atlas of Oral and Maxillo facial Surgery Clinics (2004).

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.: 1052****Comparing the Pain Expected vs. the Pain Experienced in Patients Undergoing Impacted Mandibular Molar Removal***Dr. Ishwarya P.**Government Dental College and Hospital, Vijayawada*

Abstract**Introduction**

“Will it hurt?”—The subliminal thought of almost every patient. Pain has become heavily associated with dentistry and has led to more patients becoming anxious and hesitant to visit their dentist. This is partly caused to ill-informed patients who may have researched online or received stories of traumatic experiences from other people. Despite advances in technology and techniques to minimise pain, patients still regard dental treatment as one of the most painful experiences in life. However, to what extent is this true?

Methodology

250 adult patients with Impacted Mandibular Molar undergoing extraction were chosen as the population for this study. Data was collected using VAS and Wong Baker pain rating scale prior to the commencement of treatment to provide an insight into the patient's mentality towards dental extractions. Once this was done, the dental extraction was performed under local anaesthesia. The Wong Baker pain rating scale repeated at the end of the treatment to record the pain experienced. Each face of the Wong Baker scale was assigned a numerical value: 0 = “No pain” and 10 = “Worst pain imaginable”.

Results

Median pain expected value was found to be (5), whilst the median pain experienced value was (2). Median difference between the pain experienced and pain expected was approximately 3 ($P < 0.0001$). Horizontal impactions were found to have the most pain experienced.

Conclusion

Patients expect significantly more pain than they experience from undergoing impacted mandibular molar removal.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.: 1101****Peripheral Neurectomy For Trigeminal Neuralgia***Dr. Sabari Nathan Rajamoorthy, Dr. Killampalli Y. V. Satyanarayana**Saveetha Dental College and Hospitals***Abstract**

Trigeminal neuralgia (TN) is defined as sudden, usually unilateral, severe, brief, stabbing, lancinating, paroxysmal, recurring pain in the distribution of one or more branches of the 5th cranial nerve. Tic Douloureux and Fothergill's disease are the synonyms used to describe the same disease. Despite the condition being known for centuries, it continues to baffle the clinician and its pathogenesis remains an enigma to the medical profession. Multiple views have been hypothesized regarding its etiology generating nothing but confusion, and simultaneously opting for many different therapies to treat this ongoing condition. Peripheral neurectomy, cryotherapy, botulinum toxin, and peripheral nerve injection with glycerol/alcohol or streptomycin are some options, that provide temporary relief. This case report presents a case of trigeminal neuralgia of a 40-year old female involving the third division of the trigeminal nerve, who presented with characteristic features of inferior alveolar neuralgia who was successfully treated with peripheral neurectomy of inferior alveolar nerve and mental.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.: 1251****Envelope Flap versus Modified Wards in Mandibular 3rd Molar Dis-Impaction Surgery***Dr. Rayasam Satya Siva Sri Hemanth**St. Joseph Dental College***Abstract****Background**

The main purpose of this experimental study is to investigate the effect of envelope flap and modified flap in relation to postoperative outcomes of mandibular second molar in surgical extraction of impacted mandibular third molar extraction.

Aim

To understand and investigate the effect of different flap designs on accessibility, post operative pain, swelling and trismus, periodontal health status of mandibular second molar after the impacted third molar extraction.

Materials and Methods

Sixty patients, aged between 18 and 25 years who were attending Oral and Maxillofacial Surgery Department, Saveetha dental College and hospital, who required surgical removal of impacted mandibular third molar teeth and good oral hygiene were eligible for inclusion in this study (Group A = Envelope Flap, Group B = Modified flap), the surgical extraction was carried out under local anesthesia. The primary outcome variables were pain measured using VAS (Visual analogue scale), swelling in mm; mouth opening measured in mm, and surgical accessibility. Statistical significance was set at 5% ($p = 0.05$).

Results

No statistically significant differences were found in comparing of pain, swelling, trismus and periodontal status between both the type of flap design used.

Conclusion

This study concluded that both envelope flap and modified ward's flaps showed good efficacy. Design of mucoperiosteal flap used in surgical removal of impacted mandibular third molar have no effect on the degree of pain, swelling, trismus and periodontal health of adjacent second molar.

Keywords Envelope flap, Modified wards, Mandibular 3rd molar, Disimpaction surgery

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.:** 1356**Comparative Evaluation of Analgesic Effect of 4% Articaine with 2% Lignocaine in Surgical Extraction of Mandibular Third Molar: A Prospective Study***Dr. Prasanna Guru E.**Saveetha Dental College and Hospitals***Abstract****Background**

Surgical extraction of impacted third molar is one of the most common surgical procedure performed by a maxillofacial surgeon.¹ To provide a pain free treatment to patients, numerous local anesthetic agents has been used by surgeon. However, gold standard has been lignocaine hydrochloride.² Articaine entered clinical use in 1976. Though it is one of the long-lasting anesthetics with more extended anesthetic effects, evidence basis for articaine's reputation is not entirely clear. 4% Articaine is more potent and has longer duration of action with better postoperative analgesia and could be considered as an alternative to lignocaine in clinical practice.

Aim

To evaluate and compare the analgesic effect of 4% articaine with 1:100,000 adrenaline and 2% lignocaine with 1:200,000 adrenaline for surgical extraction of impacted mandibular third molars.

Methods

Study conducted on 50 patients referred to department OMFS for surgical removal of impacted third molar. Participants divided randomly into two groups receiving either 4% Articaine HCl with 1:100,000 epinephrine or 2% Lignocaine HCl with 1:200,000 epinephrine. As per Pederson difficulty index, moderately difficult impaction included in the study. Drug volume, onset of anaesthesia, duration of anaesthesia and duration of postoperative analgesia intake were evaluated for both groups.

Result

Awaited.

Conclusion

Awaited.

References

- Mercier P, Precious D. Risks and benefits of removal of impacted third molars. *J Oral Maxillofac Surg.* 1992;21:17–27.
- Snoeck M. Articaine: a review of its use for local and regional anesthesia. *Local Reg Anesth.* 2012;5:23–33.

Category: Student: E-Poster**Theme: Dentoalveolar Surgery/Nerve Injuries****Reg. Num.:** 1497**Sentinel Lymph Node Biopsy versus Elective Neck Dissection for Occult Nodal Metastasis in Oral Squamous Cell Carcinoma: A systematic Review and Meta-analysis***Dr. Pooja Gopal Choudhary**Goa Dental College and Hospital***Abstract****Background**

The management of the clinically and radiologically negative neck in patients with early squamous cell carcinoma (SCC) is still a controversial. Occult metastasis of the neck lymph nodes is considered an important prognostic factor in oral squamous cell carcinoma. However, although elective neck dissection (end) is associated with the favourable survival, it will adversely affect the quality of life. In addition, neck dissection could cause more damage to neck structures and might be too invasive for the patients in the early stage. Sentinel lymph node (SLNB) has been introduced as a diagnostic staging modality for detection of occult nodal metastasis.

Aim

The aim of this systematic review and meta-analysis is to evaluate the potential dividends of sentinel lymph node biopsy to the routinely performed elective neck dissection (END).

Method

We searched the Pub-med and Google scholar library for potential studies. This meta-analysis includes six prospective studies, comparable results of the two management strategies are evaluated in terms of:

- Recurrence rate.
- Disease free survival.
- Overall survival.

The synthesised results of dichotomous data were expressed as relative risk (RR) and 95% confidence intervals (CI). The statistical significance was set at *P* value 0.05.

Result

The SLNB results in a favourable oncologic prognosis for patients with cN0 oral SCC as Elective neck dissection, while significantly lessening side effects and unnecessary surgeries.

Category: Student: E-Poster**Theme: Head and Neck Oncology****Reg. Num.:** 158**Scapula Free Flap in Head and Neck Oncologic Reconstructions***Dr. Abhinav Mitra**AJ Institute of Dental Science*

Abstract**Introduction**

Microvascular free flaps represent the main choice for the reconstruction of composite maxillo-mandibular defects, after resection of head and neck malignancies. Scapula flap has favorable characteristics that makes it suitable for bone, soft tissue, or combined defects.

Methods

This was a retrospective study of 24 patients after oncologic resection of maxilla (8 cases) and mandible (16 cases) from 2017 to 2021. In 4 cases only scapular bone was used, in 13 cases scapula lateral border with parascapular flap were used, in 7 cases scapula tip with Latis-simus dorsi were used.

Results

This study includes detailed data regarding the flap, such as pedicle length, size of the harvested bone, and failure rate. The esthetic outcome and the flap status was checked postoperatively after 6 months.

Discussion

Scapula flap is based on the same pedicle and allows wide mobility of soft tissues with respect to its bone component, suitable for defects of large size involving both the soft tissues and the bone.

Conclusion

This study demonstrates the reconstructive advantages of the angular branch-based STFF, long pedicle, low flap failure, 3-dimensional nature of bone and soft tissues, and small rate of donor site morbidity with free ambulation.

References

1. Choi N, Cho J, Jang J, Cho J, Cho Y, Baek C. Scapular Tip Free Flap for Head and Neck Reconstruction. *Clinical and Experimental Otorhinolaryngology*. 2015;8(4):422.
2. Valentini V, Gennaro P, Torroni A, Longo G, Aboh I, Cassoni A et al. Scapula Free Flap for Complex Maxillofacial Reconstruction. *Journal of Craniofacial Surgery*. 2009;20(4):1125–1131.

Category: Student: E-Poster**Theme: Head and Neck Oncology****Reg. Num.: 210****Sequelae of Basal Cell Carcinoma***Dr. Hastee Bhanushali**Goenka Research Institute of Dental Science***Abstract****Background**

Basal cell carcinoma (BCC) is a nonmelanocytic skin cancer that arises from basal cells. BCC accounts for about 75% of all skin cancers. This skin cancer usually develops on skin that gets sun exposure, such as on the head, neck, or back of the hands. Basal cell carcinoma can also appear on any part of the body, including the trunk, legs, and arms. This type of skin cancer grows slowly. It rarely spreads to other parts of the body. At first, a basal cell carcinoma comes up like a small pearly bump that looks like a flesh-coloured mole or a pimple that doesn't go away. Treatment is important because Basal cell carcinoma can grow wide and deep, destroying skin, tissue, and bone.

Case Report

A case report of basal cell carcinoma, in a 39-year-old male who had to undergo aggressive treatment with the multi-disciplinary actions of maxillofacial surgeon, prosthodontist, oncologist and radiologist, we could restore the facial structures using a maxillofacial prosthesis which helped patient to gain confidence in himself and made him presentable to society.

Conclusion

The prognosis for patients with BCC is excellent, with a 100% survival rate for cases that have not spread to other sites. Nevertheless, if BCC is allowed to progress, it can result in significant morbidity, and cosmetic disfigurement is not uncommon.

Category: Student: E-Poster**Theme: Head and Neck Oncology****Reg. Num.: 254****A Comparison of the Use of Harmonic Scalpel Versus Conventional Technique for Neck Dissection in Head and Neck Surgery***Dr. Ahana Mol U. K.**PMS College of Dental Science and Research***Abstract****Introduction**

Neck dissection has been recognized as an integral part of the surgical therapy of head and neck cancer. Though the use of Harmonic scalpel is relatively new, it has advantage of providing a bloodless surgical field, thus facilitating surgery and reducing operative time.

Aim and Objectives

To evaluate the effectiveness and advantages of ultrasonic harmonic scalpel over conventional hemostatic techniques used in neck dissection.

Methods

Ten patients diagnosed with oral carcinoma were randomized into 2 groups, of which five neck dissection performed using Harmonic scalpel and five using conventional methods. The evaluation is concerned with duration of the neck dissection, intra-operative blood loss, fluid collection in neck drains.

Results

Comparison by unpaired t test showed, mean intra-operative time was 104.60 ± 9.2 min and 118.20 ± 7.1 min, mean neck drain collection was 87 ± 53.1 ml; 59 ± 12.4 ml and 64 ± 20.7 ml and 64 ± 21.9 ml; 46 ± 11.4 ml and 27 ± 14.8 ml on the 1st, 2nd and 3rd day, mean intra-operative blood loss was 43.86 ± 7.9 ml and 83.80 ± 6.4 ml in Harmonic group and Conventional group respectively.

Conclusion

This study concluded that the use of harmonic scalpel shortens the surgical time in neck dissection and decreases blood loss.

References

1. Kos M, Engelke W. Advantages of a new technique of neck dissection using an ultrasonic scalpel. *J Craniomaxillofac Surg*. 2007.
2. Dubner S. Head and Neck Cancer-Resection and Neck Dissection. *Medscape* 2015.

Category: Student: E-Poster**Theme: Head and Neck Oncology****Reg. Num.: 261****A Case of Well Differentiated Squamous Cell Carcinoma in 40 Year Old Woman Due to Chronic Trauma from Tooth to the Lateral Border of Tongue***Dr. Prathamesh Suryakant Karande**P. M. Nadagouda Dental College and Hospital, Bagalkot***Abstract****Introduction****Case Description/Method**

A 40-year-old female reported with a chief complaint of pain in the left border of the tongue from 6 months due to chronic trauma from the adjacent tooth. i.e., 36 and 37. On taking the biopsy, a well differentiated squamous cell carcinoma was the conclusion. Patient wanted to undergo surgery and a Hemi-Glossectomy with RND (radicular neck dissection).

Results

The surgery was successfully performed and the patient recovered a good pace. The post op follow-up was done. No post-surgical growth was noticed. Hence, no radiotherapy indicated.

Discussion

Well-differentiated squamous cell carcinoma affecting the lateral border of the tongue is characterized by presence of keratin pearls, masses of prickle cells within connective tissue surrounded by basal cell with central keratinization. should be diagnosed by radiographical examination for both soft and hard tissue involvement for planning the treatment pre-operatively. After examination of the involving areas type of neck dissection is planned.

Conclusion

The presenting case is a traumatic ulcer which became malignant in 6 months and revealed involvement of sub-mandibular lymph nodes radiographically. Biopsy revealed the presence of ulceration in squamous epithelium and sub epithelium showing nests of tumor islands having enlarged vesicular nuclei showing anisocytosis. Surgery was performed and a positive outcome was obtained as the patient was happy and satisfied with the thought of avoiding any further radiotherapy.

Keywords Squamous cell carcinoma, Lateral border of tongue, Traumatic ulcer, Hemi-Glossectomy.

Category: Student: E-Poster**Theme: Head and Neck Oncology****Reg. Num.: 271****A Novel Approach to the Infratemporal Fossa Tumors***Dr. Keshav Pawar**Sree Balaji Dental College and Hospital Chennai***Abstract**

Surgical removal of tumours involving the infratemporal fossa is a tedious procedure with several potential complications which include damage to nerves like the cranial nerve VII, VIII, IX, XI, XII, internal carotid artery. Although there are multiple complications involved, tumours in this region needs to be addressed so as to prevent invasion of lateral skull base followed by the cranial cavity which is fatal.

The infratemporal and pterygopalatine fossae are difficult to access surgically and numerous approaches have been described. The Maxillary swing approach was first described by Hernán-dez Altemir in 1986 as an alternative access to infratemporal tumours. It opens the maxilla-zygomatic complex like a book, which leaves it vascularised through the facial skin and it leads to good open visualisation and access of the infratemporal fossa. This approach is employed for tumours involving the palate and the infratemporal fossa. Approaching isolated infratemporal tumours was questionable. With advances in technology, endoscopy can be used as an alternative for removal, although it is limited to medial tumours and en bloc resection is impossible. Thus, a new technique of modified zygomatic swing approach for removal of tumour has been suggested. This poster describes this new technique in removal of malignant tumour of the infratemporal fossa that does not involve the hard palate and its advantages over other surgical approaches.

Reference

1. Schlund M, Depeyre A, Raoul G, Nicot R. Zygomatic swing approach to the infratemporal fossa. *British Journal of Oral and Maxillofacial Surgery*. 2019 Jul 1;57(6):600–2.

Category: Student: E-Poster**Theme: Head and Neck Oncology****Reg. Num.: 294****A Comprehensive Protocol on Management of Trismus in Patients with Head and Neck Cancer***Dr. Anvika Ashok**Bapuji Dental College and Hospital, Davangere***Abstract****Introduction**

Trismus, also known as restricted mouth opening, is one of the most common and underrated side effects of head and neck cancer. It affects an individual's ability to talk, chew and swallow thus hampering social communication and lifestyle. In spite of having such detrimental consequences, trismus is not given adequate importance by physicians pre-operatively as the focus solely lies on treating the cancer. However, appropriate management of cancer should also improve the overall status of the patient. Our goal is to thus build a protocol based on existing literature to help surgeons to easily prevent and manage trismus in order to improve the overall quality of life.

Methodology

A literature review was conducted till July 2021 using PubMed, Web of science and Google Scholar with specific keywords or MeSH terms. Around 800 articles were screened following which 38 articles were short-listed for the review. Articles that were selected were those which showcased head and neck cancer patients suffering from

trismus and mentioned either their risk factors, prevalence or effects of different treatment modalities on the severity and occurrence of trismus.

Results and Discussion

A comprehensive protocol beginning from pre-operative period till a post-operative period of 2 years was formulated. Key factors such as size, site and type of cancer, type and combination of treatment modality used and high risk situations were included to build a step by step approach towards managing trismus and reducing its incidence.

Reference

1. van der Geer SJ, van Rijn PV, Kamstra JI, et al. Prevalence and prediction of trismus in patients with head and neck cancer: A cross-sectional study. *Head Neck*. 2019;41(1):64–71.

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 311

Nomogram for Value Added Preoperative Assessment In Patients with Oral Cancer

Dr. Shambhavi Prashant Nadkarni

Government Dental College and Hospital, Mumbai

Abstract

Oral cancer is becoming a pressing problem worldwide. WHO predicts a continuing worldwide increase in the number of patients with oral cancer. This literature review focuses on highlighting the importance of preoperative assessment of oral cancer and building a structured diagnostic strategy to improve the prognosis and overall survival rate. Conventionally, oral exploration and palpation constitute the first step in clinical staging of oral cancer using AJCC-TNM classification. The definitive diagnosis is established by histological grading of the incisional biopsy specimen followed by radiological examination of the head and neck. The aim is to increase the diagnostic accuracy by using the data obtained by preoperative assessments judiciously. Clinical examination should include measurement of tumor thickness. Additional histological parameters such as depth of invasion, invasive tumor front, tumor budding, perineural spread a lymphovascular spread has to be determined from the incisional biopsy specimen. The imaging techniques like USG, CECT and MRI offers additional information to correlate with findings of clinical and histopathological examination. Hematological parameters—PLR, LMR and NLR can be used in the calculation of systemic immune index. Molecular markers—p53, Ki67, EGFR can be recommended for routine clinical use as prognostic markers. PET can be used to determine local and distant metastasis. This nomogram will allow us to add more value to routine preoperative assessment tools for the treatment planning, prognosis and quality of life.

References

1. deKoning, S. B., Karakullukcu, M. B., Lange, T. J. M., 2019. The oral cavity tumor thickness: Measurement accuracy and consequences for tumor staging. *European journal of surgical oncology*, 45(11), pp. 2131–2136.

2. Montero, P. H., Shah, J. P., Shaha, A. R., Boyle, J. O., 2014. Nomograms for preoperative prediction of prognosis in patients with oral cavity squamous cell carcinoma. *Cancer*, 120(2), pp. 214–221.

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 444

Long-Standing Massive Ameloblastoma of Mandible: Reconstructed with Single Free Fibula Osteomyocutaneous Flap

Dr. Yashwanth Raju K. R.

Faculty of Dental Sciences, Ramaiah University of Applied Sciences

Abstract

Background

Ameloblastoma is a locally aggressive and infiltrative benign odontogenic tumor with high recurrence potential. The challenge in managing ameloblastoma lies in complete excision and reconstruction of the defect. This poster represents management of a massive mandibular ameloblastoma which was treated with radical resection followed by reconstruction with single free fibula osteomyocutaneous flap (FFF).

Case Description

A 46 year old male patient reported with a 10 × 10 cm painless, firm, indurated growth from angle to angle of mandible for the past 10 years. Inferiorly, it was abutting the hyoid bone with cutaneous sinus opening. CT scan showed multilocular lesion with multiple foci of calcification in the mandible. Biopsy of the lesion revealed plexiform type ameloblastoma. Segmental mandibulectomy from angle to angle of mandible along with resection of overlying skin was performed. Bony and soft tissue defect was reconstructed with a single FFF.

Conclusion/Clinical Significance

Cases where adjuvant radiation is not required such large complex oromandibular defects can be successfully reconstructed by single FFF.

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 500

Quality of Life Assessment using University of Washington Quality of Life Questionnaire in Oral Cancer Patient undergoing Neck Dissection with or without Radiotherapy

Dr. Ziaur Rahman

HPGDC Shimla

Abstract**Background**

The purpose of this study was to investigate shoulder function and Quality of Life following neck dissection and if radiotherapy is a significant predictor of Quality-of-Life scores in head and neck cancer patients. The University of Washington Quality of Life questionnaire was used.

Methods

The study was conducted in Department of Oral and Maxillofacial Surgery, SCB Dental College and Hospital, Cuttack and Acharya Harihar Regional Cancer Centre, Cuttack from January 2020–June 2021 in diagnosed oral squamous cell carcinoma. Questionnaire were given at four intervals: i.e., before surgery, before start of radiotherapy, after completion of radiotherapy and six months post radiotherapy.

Results

Out of twenty patients who underwent primary surgery for oral cancer, 12 had microvascular free flap reconstruction and 8 had post operative radiotherapy. Patients with the category T3 or T4 tended to report more severe problems/worse QOL scores than those with category T1 or T2. There was a marked fall in cumulative UWQOL scores by 3 months with some recovery at 6 months post operative follow up. Due to outbreak of COVID-19, the regular follow up could not be done and telephonic consultation was done to record QOL scores for those without radiotherapy.

Conclusion

Patients undergoing surgery and adjuvant radiotherapy have a profound fall in Quality-of-Life scores by 3 months with some improvement at 6 months. The UWQOL questionnaire can be used in clinical setting to determine QOL changes in head and neck cancer patients.

Category: Student: E-Poster**Theme: Head and Neck Oncology****Reg. Num.: 509****Incidence of Lymph Node Metastasis In Maxillary Squamous Cell Carcinoma***Dr. Pratikshya Kar**S.C.B. Dental College and Hospital, Cuttack, Odisha***Abstract**

Oral squamous cell carcinoma (OSCC) is widely recognized as the most common type of head and neck malignancy, representing the 6th most frequent leading cause of cancer death. Squamous cell carcinoma (SCC) arising from the maxillary gingiva, hard palate and maxillary alveolus are said to be relatively having low incidence. As it grows, it invades the surrounding structure and metastasizes to regional neck nodes, but it rarely develops distant metastases. The presence or absence of cervical lymph node metastases is considered to be one of the major prognostic factors for survival of the patients. Based on the literature, we believe that propensity of loco regional metastases is significant warranting neck dissection. Hence, the study was intended to evaluate the incidence and pattern of nodal metastases in maxillary SCC.

Category: Student: E-Poster**Theme: Head and Neck Oncology****Reg. Num.: 534****Operating Head and Neck Cancer During Covid Pandemic: Our Experience***Dr. Shreya Pawar**Sharad Pawar Dental College***Abstract**

Squamous cell carcinoma is the most common cancer found in the oral cavity. Surgical reconstruction of the defect created during treatment of SCC may need to be done with different types of flaps. During Covid-19 times managing head and neck cancer patients is important, where delay in surgery may lead to poor outcome. The use of pedicle flap reconstruction resulted in minimal postoperative complications and ICU stay during COVID-19 pandemic. This report describes one case of squamous cell carcinoma involving left mandibular body region crossing midline. It was managed with surgical resection followed by deltopectoral flap reconstruction.

Category: Student: E-Poster**Theme: Head and Neck Oncology****Reg. Num.: 622****Acantholytic Squamous Cell Carcinoma of Right Maxilla: A Rare Case Report***Dr. Madhuri**Lady Hardinge Medical College***Abstract**

Acantholytic squamous cell carcinoma (ASCC) was first described by Lever in 1947 who initially referred to it as Adenoacanthoma of the sweat glands. He later revised this classification to describe ASCC as a lesion that is a squamous cell carcinoma (SCC) with a unique acantholytic change that is not glandular. ASCC is predominantly found in elderly individuals on sun-exposed areas of the skin, predominately the head and neck regions and upper extremities. The lesions found in the oral cavity are extremely rare. As a subtype, ASCC is often regarded as having greater potential for metastasis and recurrence. Its histological characteristics include typical squamous differentiation with discrete or diffuse areas of keratinocytic acantholysis with a pseudo-glandular appearance. Hereby this case presentation emphasizes a case of ASCC of the right maxilla in a 65 years old male patient who presented an ulcero-proliferative lesion on the palate with a recurrence in the right gingivobuccal sulcus after 11 months. This case posed a treatment challenge because of the diagnostic dilemma where it was initially diagnosed as SCC of the palate, which later turned out to be ASCC on recurrence. This case

has also been followed up for 8 years now, which is the longest follow-up period for such case reported till date. Hence, this case presentation highlights the significance of timely diagnosis, prompt treatment, and a long-term follow-up which are the needs of the hour to tackle this rare aggressive entity.

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 644

Squamous Cell Carcinoma of Mandibular Left Alveolus Treated with Pectoralis Major Myocutaneous Flap: A Case Report

Dr. Sanjiti Madan

KLE VK Institute of Dental Sciences, Belgaum

Abstract

Introduction

A case of well differentiated squamous cell carcinoma of the left mandibular alveolus was treated. Segmental resection of the mandible was done, along with supra-omohyoid neck dissection; reconstruction was done with pectoralis major myocutaneous flap.

Case Description

A 45 year old male reported with a swelling in the lower left back tooth region since 3 months, along with pain and bleeding. The patient had undergone surgery 2 years ago for verrucous leukoplakia in the left buccal mucosa. Patient had a history of smoking, and alcohol consumption for the past 10 years, Mawa consumption for 15 years, allegedly quit 2 years ago.

Results

Supra-omohyoid neck dissection was done, and Levels Ia, Ib, IIa, IIb, III, and IV cervical lymph nodes were dissected and excised. Sternomastoid muscle was excised. Spinal Accessory Nerve was preserved. The lesion was excised with segmental resection of the mandible. Reconstruction was done using a PMMC flap was done.

Discussion

The histopathology report revealed hyperkeratotic dysplastic stratified squamous epithelium with underlying connective tissue stroma. The epithelium showed dysplastic features. The malignant epithelial cells were seen invading the connective tissue stroma in the form of individual cells, clusters and islands. A diagnosis of Well differentiated squamous cell carcinoma was given.

Conclusion

It can be concluded that continued habits of alcohol consumption, smoking and mawa consumption may have led to the malignant transformation of a leukoplakic lesion into well differentiated squamous cell carcinoma.

Keywords Squamous cell carcinoma, well-differentiated, supra omohyoid neck dissection, pectoralis major myocutaneous flap

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 651

Neuropathic Cancer Pain Syndrome Management: Gabapentin as an Adjuvant to Opioids

Dr. Bhagyasree Nair

Sree Balaji Dental College and Hospital

Abstract

Cancer induced neuropathic pain is one of the most dreaded symptoms in cancer patients. Management of cancer pain involves sophisticated assessment of the contributors of pain expression, pharmacologic and psychoeducational intervention, and interventions for refractory pain. Opioids are the main stay for management of advanced and terminally ill patients, but they are not the ideal option as Opioid-induced side effects such as neurotoxicity includes a constellation of neuropsychiatric symptoms such as excessive sedation, addiction, cognitive impairment, delirium, hallucinations, myoclonus, alongside a plethora of concurrent symptoms such as nausea, fatigue and insomnia and opioid-induced hyperalgesia, which may be present alone or in any combination despite being the go to drug in such patients. Gabapentin is a safe and effective anticonvulsant with a wide therapeutic index. This review analyses its role as an adjuvant for neuropathic cancer pain syndrome.

References

1. Caraceni A, Zecca E, Martini C, De Conno F. Gabapentin as an adjuvant to opioid analgesia for neuropathic cancer pain. *J Pain Symptom Manage.* 1999 Jun;17(6):441–5.
2. Caraceni A, Zecca E, Bonezzi C, Arcuri E, Yaya Tur R, Maltoni M, Visentin M, Gorni G, Martini C, Tirelli W, Barbieri M, De Conno F. Gabapentin for neuropathic cancer pain: a randomized controlled trial from the Gabapentin Cancer Pain Study Group. *J Clin Oncol.* 2004 Jul 15;22(14):2909–17.

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 980

Liquid Biopsy: Modern Diagnostic Tool for Oral Cancer

Dr. S. S. Shreyas

Bapuji Dental College and Hospital, Davangere

Abstract

Introduction

Oral SCC is the ninth most common neoplasm across the globe and is a significant cause of cancer morbidity and mortality. Oral cancer includes malignant neoplasms arising in the lips, hard palate, upper

and lower alveolar ridges, sublingual region, buccal mucosa, anterior two-thirds of the tongue, retromolar trigone and floor of the mouth. Oral squamous cell carcinoma is sometimes detected very late which leads to poor prognosis of the patient.

Aim

To review liquid biopsy as a diagnostic tool for oral SCC.

Methods

In this poster we will highlight the importance of liquid biopsy, i.e. using blood and saliva, which is an alternative to solid biopsy. Moreover, liquid biomarkers like circulating tumour cells, DNA, and exosomes which will allow real time monitoring of tumour evolution and therapeutic responses, which can lead to personalized medicine and better follow up of the cases. This will help in early detection of cancer. This method has its own limitations which will also be discussed in the poster.

Conclusion

In oral cancer, the lesion is usually visible and easily accessible for procuring biopsy, therefore, liquid biopsy may sound redundant as a diagnostic tool. But, biopsy is an invasive procedure and involves physical pain to the patients, and liquid biopsy also helps with early detection even when the lesion is very small. Hence, liquid biopsy plays a pivotal role in non-invasive detection of cancer at early stages of the disease which will lead to early intervention and better prognosis.

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 1010

The Use of Local Flap–Limberg Flap for Reconstruction of Maxillary Defect in Head and Neck Oncology: A Case Report

Dr. Rishikesh Kumar

K.V.G Dental College and Hospital

Abstract

Introduction

Maxillary reconstruction is a challenge in most cases of CA maxilla. Bony loss as well as need for resection of the skin poses a unique challenge as PMMC flap is too bulky, DP and forehead flap is considered as a salvage flap. In this case, where minimal skin resection is indicated, a random local flap may be considered. It is an interesting procedure for skin movement in which a rhomboid defect is created and then closed with a rhomboid shaped flap of a similar size. The surgeon's goal is to avoid unsightly scars while using the simplest, most effective reconstructive approach.

Observation

The poster demonstrates the versatility of the rhomboid flap–limberg flap in head neck region. A case of left CA maxilla operated for left partial maxillectomy + primary closure was done using limberg flap.

Conclusion

This poster concludes Limberg flap is a very versatile, easy to master flap that can be applied with extreme safety. As there is abundance of subcutaneous tissue in the face, it can be easily used to correct small to medium sized defects with good cosmetic results.

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 1015

TORS: The Next Generation Robotic Approach to Treat Head and Neck Cancers

Dr. Gaurav Madhukar Nerkar

Dr. DY Patil Dental College and Hospital, Pune

Abstract

Morbidity and mortality associated with increasingly radical doses of chemoradiotherapy have led many to question the current standard of care in head and neck cancer. Recently, surgeons have developed minimally invasive, transoral techniques which have demonstrated excellent survival and favorable functional outcomes. Transoral robotic surgery (TORS) is the forefront in the evolution of transoral techniques and it deals with Next-generation computing, visualization, and artificial intelligence technology. The aim of this presentation is to give an overview of robotic assisted surgery in different anatomical areas of research in the field of OMF, craniofacial and head and neck surgery.

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 1105

Effectiveness of Stem Cells and Platelet Rich Plasma in the Treatment of oral Submucous Fibrosis

Dr. Rapeti Kavya Kumari

Government Dental College and Hospital, Vijayawada

Abstract

Introduction

Treatment of oral submucous fibrosis (OSMF) is a challenge, especially as the disease progresses and depends on grading of OSMF including medicinal and surgical. Stem cell therapy is primarily aimed at neo angiogenesis by releasing cytokines, growth factors paracrine effect. This results in increased free radical scavenging by antioxidants either naturally occurring or extraneous. Platelet rich plasma (PRP) is a growth factor enriched with platelet concentrate obtained from whole autologous blood by using density grade centrifugation.

Aim and Objectives

The aim of the study is to evaluate the effectiveness and outcome of stem cells and PRP in the treatment of OSMF.

Methods

10 patients reporting to the Department of oral and maxillofacial surgery with OSMF were examined and evaluated for receiving the treatment of stem cells and PRP. Patients peripheral blood was

withdrawn, centrifuged and concentrated solutions containing stem cells and PRP was injected in affected areas. At follow up appointments mouth opening, reduction of burning sensation were assessed.

Results

At the end of 6 months followup there was reduction of burning sensation along with changes in the mucosa. Results were significant in patients with stage two OSMF specifically.

Conclusion

We conclude that with the stem cells and PRP can be a new effective tool in the treatment of OSMF as a point of care delivery system, however we need more long term follow ups to obtain more significant results.

Reference

1. Gupta D, Sharma SC. Oral submucous fibrosis: a new treatment regimen. *J Oral Maxillofac Surg* 1988; 46: 830–833.

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 1198

Intensity Modulated Radiotherapy in Head and Neck Cancer

Dr. Priyanka Gurav

P.M Nadagouda Memorial Dental College and Hospital

Abstract

Aim

This poster is aimed to bring focus on the role of Intensity modulated radiotherapy in head and neck cancer.

Introduction

Head and neck cancer is the sixth most common cancer worldwide. Radiotherapy (RT) is used in the treatment of head and neck cancer primarily with/without chemotherapy in the postoperative setting, but also as the first definitive treatment when surgery cannot be carried out. Intensity modulated radiotherapy (IMRT), is a new method of delivering RT, which can precisely target a point within a specific tumor and reduce the dose to nearby anatomical structures. Clinical target volume 1 (CTV1), which includes primary tumor and involved nodes receive a higher radiation dose as compared to clinical target volume 2 (CTV2), which include nearby anatomical structures which are not involved, are delivered simultaneously. This is particularly important in head and neck region where conventional RT can easily irreparably damage the anatomical structures which are not involved like salivary glands, spinal cords, cranial nerves etc., thus causing adverse effects like xerostomia, dysphagia, osteoradionecrosis, mucositis etc.

Conclusion

IMRT has become standard of care for delivering RT in patients with head and neck cancer. Locoregional recurrence and the overall survival rates are comparable to conventional RT with decrease amounts of adverse effects. IMRT has demonstrated improvement in head and neck cancer irradiation by reducing long term side effects by reducing the dose to uninvolved anatomical structures, thus improving the quality of life.

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 1236

Management of Chyle Leak: A Case Report

Dr. Vaibhavi

A J Institute of Dental Science

Abstract

Introduction

Chyle leakage post neck dissection in head and neck surgeries are uncommon but a potentially life-threatening complication. Prompt identification and treatment of a chyle leak are essential for optimal outcome.

Case Report

A 60 year old male patient who was diagnosed with left lateral border of tongue carcinoma and underwent Hemiglossectomy and left modified radical neck dissection under GA complicated by a chyle leakage post operatively. It was treated with conservative management initially followed by thoracoscopic ligation of the thoracic duct. Post-operative Chyle Output after ligation of the thoracic duct was monitored and found to have reduced significantly.

Discussion

Neck dissection is most commonly used in the management of malignancies of head and neck. Chyle leak from iatrogenic thoracic duct injury is a rare but serious complication that occurs in 0.5–1.4% of thyroidectomies and 2–8% of neck dissections. The thoracic duct serves a crucial role in the maintenance of fluid balance and return of lymph and chyle to the systemic circulation. Thoracic duct injury is one of the most common complication after left lateral neck dissection (75–90%), and it carries a high degree of morbidity. Management may be problematic and prolonged. Recently, thoracoscopic ligation of the thoracic duct has emerged as a promising technique to definitively treat this difficult problem.

Conclusion

In the light of clinical experience and following a thorough literature review, complicated or high-output chyle leaks > 1000 ml/day should be treated with early thoracoscopic thoracic duct ligation.

Category: Student: E-Poster

Theme: Head and Neck Oncology

Reg. Num.: 1303

Potential of Nanocurcumin: A Natural Alkaloid Against Oral Squamous Cell Carcinoma

Dr. Ishwarya R., Dr. Dhaya Ann Varghese

KVG Dental College and Hospital

Abstract

Most common head and neck cancers include Oral squamous cell carcinoma accounting for almost 90%. There are various treatments available which individually or in combination are used for cancers. Most patients can't withstand chemotherapy and radiotherapy due to the side effects and toxicities associated with them. Curcumin (diferuloylmethane) is a phytophenol pigment derived from *Curcuma longa*. Curcumin exhibits antineoplastic property by inhibition of tumor cell proliferation. But the main disadvantages associated with the oral administration of curcumin are: Poor bioavailability, reduced permeability that limits its systemic bioavailability, high metabolic instability. To negate these shortcomings, nanotechnology is considered as a potential option. Nanocurcumin of submicron size has the major advantage of reaching even virtually inaccessible organs. The higher cellular uptake increases the residence time of nanocurcumin within the tumor site which leads to better drug-mucus interaction to improve in situ delivery. Nanocurcumin is extremely stable with improved pharmacokinetics and increased half life. In this poster we will be discussing the use of Nanoformulations of curcumin as an innovative treatment strategy for oral squamous cell carcinoma along with its wide range of research potential.

Category: Student: E-Poster**Theme: Head and Neck Oncology****Reg. Num.: 1359****Genes Involved in the Epithelial–Mesenchymal Transition in Oral Cancer: A Systematic Review***Dr. Devika J.**Yenepoya Dental College***Abstract**

Oral cancer is a malignant neoplasm characterized by genomic instability, cellular heterogeneity and high aggressiveness. The most frequently affected oral locations in OSCC include tongue, floor of the mouth, buccal mucosa and palate. Despite therapeutic advances, prognosis remains unpredictable. The epithelial mesenchymal transition phenomenon is a dynamic process in which the migratory capacity and invasiveness of epithelial cells is enhanced by the loss of intercellular adhesion and polarity. When EMT occurs, a higher rate of metastasis is observed, with a worse prognosis and a lower survival of patients. According to the results of the recent studies it can be concluded that high expression of HNRNPC, ITGA5, HMGA2 and SRSF3 promotes EMT in OSCC. Similarly, low expression of ALDH3A1 and ARID2 facilitates the EMT process. Therefore, the over- and under-expression of the above-mentioned genes may lead to a worse prognosis of OSCC patients. For that reason, detection of these genes/proteins in OC biopsies could be useful in order to predict the prognosis of survival chance of patients.

Category: Student: E-Poster**Theme: Head and Neck Oncology****Reg. Num.: 1361***Dr. MD Khizar Hussain Mazhari***Abstract**

XXXX

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 146****C-Arm Guided Foreign Body Retrieval from Preauricular Region in a 3-Year-Old Child***Dr. Kime Nuyu**Goa Dental College and Hospital***Abstract**

Most often, the exploratory removal of an embedded foreign body from the head and neck region is a Herculean task. Many factors such as the size and the type of the object, the difficult access, proximity of the foreign body to vital structures and the age of the patient pose challenges to a maxillofacial surgeon when it comes to its retrieval part. Mostly, they are detected with their clinical (pain, pus discharge, sinus formation) or radiological representation. Although computed tomography (CT) is considered the gold standard for the detection of foreign bodies because of the ability to localize an object in multiple planes and the creation of a three-dimensional image, introduction of intraoperative computer-assisted radio monitoring (C-arm) paved the way for reducing the strenuous procedure of foreign body retrieval in maxillofacial area. This poster discusses about the foreign body retrieval from the preauricular region of a 3-year-old child precisely using an intraoperative C-arm technique.

References

1. Teng B, Yang J, Feng Q, Wang Y, Xin X. Removal of infratemporal fossa foreign body under C-arm. *J Craniofac Surg.* 2014 Jul;25(4):1313–4.
2. Wu X, Li A, Tan J, Ou X. Removal of orbital-maxillary sinus-pterygopalatine fossa foreign body with external and endoscopic combined approach. *J Craniofac Surg.* 2014 Jul;25(4):1547–9.

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 221****Tracheostomy in Patients with Head Injury Concomitant with Maxillofacial Injury: Resident's Experience in Trauma Centre***Dr. Manju S.**MES Dental College***Abstract**

Airway management is an integral part of trauma centre. Being an OMFS Resident in trauma centre getting calls for maxillofacial trauma and opinion for intubation in patients with maxillofacial injury make an OMFS Resident to play an important role in trauma management. Tracheostomy by an OMFS Resident? and firing questions from other department Residents like do you really know how to do and are you guys allowed to do? Answer to all those questions is bracing up to slit the trachea when absolutely indicated. It's not a Herculean task at the same time it's not a piece of cake. A patient with alleged history of RTA with head and maxillofacial injury reporting to trauma centre Gc poor with M3 not maintaining saturation, severe bleeding from maxillofacial region when it's the turn of OMFS Resident to put some light... what he can or should do!!!!

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 230****Chemical Burn of Tongue: A Case Presentation***Dr. Vivek Sankar M.**Government Dental College and Hospitalraipur***Abstract****Introduction**

Oral chemical burns occur when a chemical is ingested, causing burns and ulcers in the oral mucosa, esophagus, stomach, and upper digestive tract. Many types of chemicals and drugs can cause chemical burns, the severity of which depends on the concentration and quantity of the chemical as well as the manner and duration of contact with the tissue. In particular, ingestion of corrosive chemicals can cause injuries ranging in severity from mucosal erythema to transmural necrosis of the esophagus and stomach with viscous perforation, which can be life-threatening. This poster describes a case of middle aged men who accidentally ingested chemical leading to tongue fibrosis, altered speech and restricted tongue movement. In this case fibrotomy of tongue done to release tongue from floor of mouth.

Aim

XXX

Objective

XXX

Material and Methods

XXX

Results

XXX

Conclusion

Post operatively the patient was able to perform all tongue movements, patient's speech was improved. Deviation of tongue towards left side noted.

References

1. Kang S, Kufta K, Sollecito TP, et al. A treatment algorithm for the management of intraoral burns: a narrative review. *Burns* 2018; 44: 1065–1076.
2. Gilvetti C. Traumatic chemical oral ulceration: a case report and review of the literature. *Br Dent J* 2010; 208:

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 286****Reconstruction of Defect: Versatility of the Buccal Pad of Fat Flap and its Application in Oral and Maxillofacial Surgery***Dr. Vandana Tiwari**Bharti Vidyapeeth Dental College and Hospital, Pune***Abstract**

The maxillofacial region is one of the most common sites of congenital and acquired defects. Soft tissue coverage is essential for successful wound healing. The buccal fat pad flap (BFP) was initially considered as an insignificant anatomic structure without any noticeable function, contributing to be a surgical nuisance. However, the use of the BFP as a pedicle graft has become more common; the relatively easy use and the location of BFP are anatomically favorable, and minimal dissection allows it to be harvested and mobilized; The BFP is a simple and reliable flap for the treatment of many of these defects because of its rich blood supply and location, which is close to the location of various intraoral defects. Optimal epithelialization and high success rate have made it the preferred option for oral and maxillofacial applications. BFP was the choice of soft tissue coverage for various cases operated in the institute i.e., following resection of the tumor in posterior maxilla, retromolar trigone region, which has shown good uptake of the graft, better cosmetic results. Patients receiving radiation therapy or chemotherapy also experience problems in wound healing. Vascularized grafts are the only conventional method that has not failed. BFP has become a well-established tool in the field of OMFS for the closure of Oro-antral communications and also for the reconstruction of small to medium-sized bony defects in the oral cavity.

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 322****The Glue in Maxillofacial Surgery***Dr. Mistry Himani Nileshkumar**College of Dental Sciences, Davangere***Abstract****Introduction**

A number of surgeries in oral and maxillofacial region inevitably leads to creation of large soft and hard tissue defects. Primary closure of these areas may not be always possible thereby necessitating the need for a biological dressing for these raw areas. Fibrin glue proves to be one such excellent material.

Uses:

- Tissue adhesive.
- Hemostatic.
- Maxillofacial nerve repair.
- Substitute for suture material in skin graft.
- Wound dehiscence.
- Fixation of graft material.
- Oroantral fistula.
- Bone tissue engineering.
- Bone fracture fixation along with biodegradable plates.

Advantages:

- Hemostatic properties.
- Biological resorption properties.
- Reduces post-operative inflammation, helps in wound healing.
- Easily available, easy to handle.
- Patients resume normal functions immediate post-operative period.
- Protection against bacterial infection (antibacterial activity).

Disadvantage:

- Nonfatal anaphylactic reaction to aprotinin (one of components of fibrin glue).

Discussion

Fibrin glue is a safe clinically proven method of providing hemostasis, securing or glueing hard and soft tissue in proper position, and sealing friable or difficult-to-reach tissues. Future applications of this product include using FG as vehicle for the delivery of antibiotics and growth factors. Improved methods of producing autologous fibrin glue and recombinant products are also under development. These include lower cost, ease of procurement and better mechanical properties. The only disadvantage is the possibility of disease transmission. However, no cases of disease transmission have been documented.

Conclusion

Fibrin glue can be used safely and routinely in various cases of oral and maxillofacial surgeries.

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 394****Detection of Visually Imperceptible Blood Contamination in the Surgical Area Using Luminol Among Different Oral Surgical Procedures: An Observational Study***Dr. Shubham Sunil Salunkhe**CSMSS Dental College and Hospital***Abstract****Introduction**

Oral Surgeons are constantly exposed to potentially hazardous occupational infectious diseases during the minor oral surgical procedures which are transmitted not only by the direct contact of body fluids like blood, saliva and irrigation but also by the airborne aerosolized splatters that go visually imperceptible. The most common concerns are HBV, HCV, HIV and airborne infections like Covid-19, Influenza, Pneumonia. HBV and HCV can persist and survive on surfaces and devices contaminated with blood for at least 1 and 6 weeks, respectively. Such disease transmission might put clinicians, health care workers and patients at risk.

Aim

To detect visually imperceptible blood contamination by using the chemiluminescence agent LUMINOL. To scrutinize and to create awareness among professionals on wearing, removing and safe disposal of PPE kit and to ensure proper sterilization.

Methodology

17 minor oral surgical procedures (extraction, open method extraction, surgical removal of impacted tooth, arch bar fixation, biopsy) performed under disinfected closed environment were taken for our study after obtaining IEC approval. PPE kit worn by the surgeon, assistant, patient and the clinical surfaces were examined for the traces of visually imperceptible blood contamination using luminol.

Results

The parameters assessed were Blood contamination assessed on various surfaces against the duration and type of surgery performed. Among minor oral procedures, aerosol procedures of more than 30 min duration had more splatter over an area of 37-in. horizontally and 56-in. vertically from the floor of height. Aerosol splatter over the Surgeon, assistant PPE kit and patient drape are more prone for contamination compared to the non-aerosol procedures of less than 15 min duration.

Conclusion

Our study would provide scientific evidence of blood contamination which is visually imperceptible and ensure the prevention of cross infection among health professionals and patients during oral surgical procedures.

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 408****C-Arm Guided Radiofrequency Ablation: A Minimally Invasive Effective Treatment In Refractory Trigeminal Neuralgia Cases: A Case Series***Dr. K. Kohilavani**Vinayaka Mission 'Dental College***Abstract****Background**

Management of trigeminal neuralgia (TN) ranges from non-pharmacological management to microvascular decompression. Pharmacological therapy is first line of treatment. Wherever it is ineffective or manifesting significant/intolerable side effects, percutaneous procedures are considered. Amongst them, RF ablation is the most selective technique and allows for greater degree of dermatomal mapping before inflicting injury to trigeminal nerve fibres.

Research Aims/Objectives

To evaluate efficacy and safety of RF ablation in cases of refractory TN.

Methods

This case series included 5 patients with refractory TN. Neurological examination and magnetic resonance imaging of brain reveal not any significant findings. RF ablation was performed under C-arm guidance. Each patient was evaluated for pre- and post-procedure Numerical Pain Rating Scale (NPRS), and complications.

Results

100% technical success in respect to appropriate needle placement noted. All five patients had both immediate and sustained pain relief. Complications were none.

Conclusions

RF ablation is an effective and safe procedure for management of refractory TN. C-arm leads to quick and accurate needle placement.

References

1. Udipi BP, Chouhan RS, Dash HH, Bithal PK, Prabhakar H. Comparative Evaluation of Percutaneous Retrogasserian Glycerol Rhizolysis and Radiofrequency Thermocoagulation Techniques in the Management of Trigeminal Neuralgia. *Neurosurgery* 2012;70(2):407–13.
2. Texakalidis P, Xenos D, Tora MS, Wetzel JS, Boulis NM. Comparative safety and efficacy of percutaneous approaches for the treatment of trigeminal neuralgia: A systematic review and meta-analysis. *Clinical Neurology and Neurosurgery* 2019;182:112–22.

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 432****Engineering the Way for Displaced Tooth***Dr. Gupta Vyakhya Akhileshkumar**All India Institute of Medical Sciences, Patna***Abstract**

Pathologies like cysts and tumors can impede normal eruption of the tooth leading to displacement and malposition. Timely identification and removal of these barriers through surgical intervention and orthodontics pave way for eruption into the desired position. Additional procedures in the form of autotransplantation can enhance the outcome. The most important treatment for dentigerous cyst includes marsupialization and decompression followed by enucleation. The advantage of decompression is that it allows shrinkage of the cystic cavity with the formation of bone which allows the displaced teeth to descend into the alveolus. When the tooth is not descended into the proper position, alignment can be achieved with the help of orthodontics. Teeth that failed to erupt into the alveolus or did not yield to orthodontic treatment can be auto transplanted into the desired position. It is evident in literature that transplanted teeth were able to form bone around it which can be seen radiographically with the effective establishment of lamina dura around the teeth. We share our experience with 2 cases of the dentigerous cyst with the displacement of permanent teeth and its management by early decompression, orthodontic traction, and autotransplantation.

References

1. Omami, M., Sioud, S., Tlili, M., Bagga, J and Selmi, J. Replantation of maxillary premolar involved in dentigerous cyst: a case report with eight-year follow-up.
2. Picciotti, M., Divece, L., Parrini, S., Pettini, M. and Lorenzini, G.,2012. Replantation of tooth involved in dentigerous cyst: a case report. *Eur J Paediatr Dent*, 13(4), pp. 349–51.

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 442****A Typical Case of Retrieval of Sewing Needle From Tongue***Dr. Mirunalni G.**M S Ramaiah University of Applied Sciences, Faculty of Dental Sciences***Abstract**

A rare case of an embedded sewing needle in posterior tongue is presented here. It was retrieved by surgical intervention.

Introduction

Entrapment in deep, posterior part of tongue is rare, and may lead to various complications. If not managed, it may cause progression of infection to abscess and airway obstruction which is life-threatening. It may also undergo migration which is an uncommon but alarming complication.

Case Report

A 22-year-old male presented to Emergency Department with a history of accidental penetration of a sewing needle in his tongue. The patient complained of severe pain and difficulty in swallowing. The lateral view of the neck revealed a

radio-opaque foreign body parallel to the lower border of the mandible. CECT revealed a change in the orientation and angulation of the needle compared to the previous radiograph. Intraoral palpation was done to confirm the location, and an incision of about one centimeter was placed over the dorsal surface of the tongue. Gentle, blunt dissection was done using the artery forceps. A needle of size three centimeters was retrieved carefully.

Discussion

Literature is scarce about such needle penetrations and the sequence of procedures in management. Examination should include meticulous inspection for entry points, intraoral palpation and the use of CT.

Conclusion

This case emphasizes the need for detailed evaluation and prompt management to avoid complications such as aspiration and airway restriction. Utmost care has to be taken to prevent any iatrogenic injury to neurovascular structures.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 495

The Use of Protective Hydrogel in Oral and Maxillofacial Surgery

Dr. Kavya Chandra

Government Dental College, Kottayam

Abstract

One widespread complication in Oral and Maxillofacial surgery is infections. Surgeons prevent such complications by antibiotic prophylaxis, asepsis of the operative field, and maintenance of the aseptic chain during surgery. Recent step towards this is by using protective hydrogel over fixation material which prevents biofilm formation¹. Aim of this study is to relate beneficial effect in using protective antibiotic-impregnated hydrogel for stable internal fixation of plates and dental implant screws to prevent infection and thereby, promoting healing. Different techniques and materials have been used for long time in order to prevent the formation of biofilms¹. The protective hydrogel has been used in combination with antibiotics, antibiofilm agents and other substances, without altering the characteristics and functions of these substances. It has the function of covering the implant, increasing the surface energy of the material, which promotes bone growth and generates stem cell differentiation in osteoblasts, without interfering with bone-implant stability and osseointegration¹. In addition to this function, some antimicrobials can be added to hydrogel in its composition, which reduces bacterial adhesion. Hydrogel has the capacity to release antibiotics and antibiofilm compounds for a period, up to 96 h with peak in the first two

hours, generating greater protection for the surgical site and can be used for prophylaxis and treatment of surgical site infections caused by biofilm¹.

Reference

1. Grillo R, Pedrosa G, Teixeira RG. A new concept: the use of protective hydrogel in maxillofacial surgery—case report. 2020 Dec 20;70(4):363–8.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 518

Occlusion and Oral and Maxillofacial Surgery

Dr. Shreya H. R.

Coorg Institute of Dental Sciences

Abstract

Occlusion refers to alignment of the teeth and the way the teeth of upper jaw and the lower jaw meet each other. Occlusion is very important to the actual dentistry in terms of providing patients with a stable occlusion so they do not have too much force on any particular teeth, which could damage the teeth in the short or long term. Occlusal plane disruption can result in improper distribution of forces, resulting in trauma from occlusion. In oral and maxillofacial surgeries, occlusion plays a vital role in treatment and management of various surgeries. Obtaining a stable and balanced occlusion is still a challenge. The static occlusion parameters have been widely considered as goals that must be reached during the maxillofacial surgeries. The achievement of the ideal functional occlusion provided a satisfactory stability (maintenance of molar relationship and overjet) and thus the success of any maxillofacial surgery depends on the establishment of the static and dynamic criteria. This minimizes and prevents the appearance of occlusal pathologies post-operatively. This presentation will deal with occlusion of the patient pre-operatively and post-operatively in various maxillofacial surgical procedures such as in orthognathic surgeries, TMJ disorders, congenital deformities, cleft palate rehabilitation, maxillofacial trauma reconstruction, condylar deformities and tumor resection.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 551

Distraction Osteogenesis: Right Choice for Maxillary Hypoplasia

Dr. Monisha M. L.

Rajah Muthiah Dental College and Hospital

Abstract

Hypoplasias of craniofacial skeleton have multiple treatment modalities which include distraction osteogenesis/histogenesis. This process involves bone movement at 1 mm per day which induces new bone formation along the vector of pull without requiring the use of a bone graft and provides the added benefit of expanding the overlying soft tissues, which are frequently deficient in these patients along with least skeletal relapse. In the osteotomy/surgical phase, bone is cleaved and the distractor is adapted. Before proceeding with distraction, there is a latency period to allow for initial bone formation to occur. Following this, the process of distraction is activated when bone segments are gradually pulled apart using either an internal or external device. Consolidation involves locking the distracting appliance into place to maintain stability until the newly formed bone has sufficient strength. Afterwards, removal of the device and maintenance of stability is carried out, typically with the assistance of orthodontic appliances. Distraction can generate bone with the capacity for remodelling and adaptation to functional loads. The purpose of this study is to show the feasibility and potential advantages of using distraction techniques in addition to allowing surgeon to intervene earlier in childhood to restore the facial form and function.

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 569****Evaluate and Compare the Use and Effectiveness of PRP [Platelet Rich Plasma] and Threads in Facial Rejuvenation***Dr. Gourab Paul**Buddha Institute of Dental Sciences and Hospital***Abstract**

As we age, skin begins to lose elasticity and facial tissues lose volume. Eventually, this results in deep wrinkles and loose skin on the neck. Being a natural part of growing older, some patients are bothered by these signs of aging and may find facelift to be a good solution. Facial rejuvenation is a significant process involved in restoring youthfulness and patients want to overcome the aesthetic problems associated with facial aging. A youthful face is a balanced structure with smooth skin and without fine lines. Patient's desire to maintain youthful appearance has driven the minimally invasive procedures that are designed to rejuvenate the ageing face. Less invasive procedures which are quicker and simpler and do not divert patients from their daily routine and activities for prolonged periods. The study identifies the changes to the Nasolabial fold, Swelling and aesthetic appearance, pain, bruising, wrinkles and skin crease. This combination therapy is an approach that involves at least two uncorrelated and different techniques that is used to manage many cosmetic skin problem and enhance their efficacy. Hence, PRP and THREADS can provide effective, safe, relatively long lasting and natural results in the correction of prominent nasolabial fold and skin elasticity before and after the treatment.

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 595****Applications of 3D Printed Occlusal Splints in Oral and Maxillofacial Trauma***Dr. Vivek Singh Chauhan**Rama Dental College and Hospital, Kanpur, UP***Abstract****Introduction**

In the recent years, additive manufacturing has gained extensive attention in field of oral and maxillofacial trauma. Occlusal splints have been used as an adjunctive treatment of TMDs and orthognathic surgery. PMMA was used to fabricate 3D printed occlusal splints. The Digitalisation in fabrication of occlusal splints, the use of 3D printing technology has improved the accuracy and predictability of surgery and has changed the conventional approach of splint fabrication.

Material and Methods

10 patients with different maxillofacial procedures such as trauma and orthognathic surgeries who required occlusal modification for surgery were included in the study. An open mouth CT scan was taken and with the help of software, an ideal occlusion was established virtually and occlusal splint is fabricated. This was then printed using surgical guide resin.

Results

The fit of the splint was accurate in all cases and post op occlusion achieved was exactly as planned virtually as seen on an overlap of virtual planning of post operative CT scan.

Discussion

Use of 3D printed occlusal splints in trauma can provide consistency, quantitative control and also allows eliminates some of the physical procedures such as impressions, stone casts which are used in fabrication of conventional occlusal splints. 3D printed occlusal splints also requires shorter fabrication time when compared to conventional occlusal splints and are also useful for achieving better occlusion post operatively.

Conclusion

3d printed occlusal splints are important adjunct to maxillofacial patients to achieve better post operative occlusion and stability and to provide the treatment of highest caliber.

Category: Student: E-Poster**Theme: Miscellaneous****Reg. Num.: 617****Reoccurrence of Pleomorphic Adenoma***Dr. Chethan Babu, Dr. Chitra Chakravarthy**Navodaya Dental College and Hospital, Raichur*

Abstract**Aim**

Retrograde study -the cause of the pleomorphic adenoma. Pleomorphic adenoma is the most common type of salivary gland tumor and the most common tumor of the parotid gland. Because of its propensity for invasion, pleomorphic adenoma of the parotid requires superficial parotidectomy or total parotidectomy to minimize the risk of tumor recurrence. Enucleation alone is associated with high recurrence rates (8–45%), owing to the invasive histopathologic characteristics of the tumor. The present report describes a case of pleomorphic adenoma that recurred. Patient complain of swelling which is gradually increasing since two years. On past history partial parotidectomy was done 2 years back. for present complain Investigations where done, ultra-sonography relieved a solid mass, MRI reveals..... Surgery is done saving deep lobe of parotid glands. Pleomorphic adenoma occur in individuals between 30 and 60 years of age, with a predilection for the female sex. Simple enucleation of pleomorphic adenoma is associated with high recurrence rates, between 8 and 45%, which is reduced to less than 5% with superficial parotidectomy and further down to 0.4% with total parotidectomy. Although complete resection of the parotid gland decreases the risk of recurrence, the major disadvantage is with the potential complication for facial nerve damage.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 643

Fillers in Post Traumatic Management

Dr. Aakanksha Sharma

RKDF Dental College and Research Centre

Abstract

Trauma patients can experience poor soft tissue management and the morbidity associated with post traumatic maxillofacial deformity will benefit from secondary correction. Maxillofacial surgeons recognize the challenge of restoring premorbid form and function to patients with established deformities after maxillofacial trauma. Dermal fillers have matured quickly in recent years providing enhanced regenerative and aesthetic results. Fillers form an effective tool in rejuvenation, either as a stand-alone treatment or in combination with other procedures. It can be used to improve and modify residual deformities like post traumatic scars, nasal deformities, naso-orbital deformities, zygomatic complex, malocclusion (Maxilla and Mandible).

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 653

Trigemino-cardiac Reflex

Dr. Takshitha T.

Krishnadevaraya College of Dental Sciences and Hospital

Abstract**History**

The trigeminocardiac reflex was first described as ‘oculocardiac reflex’ in 1908. In 1988, the term ‘trigemino-cardiac reflex’ was described by anesthetists, Shelly and Church.

TCR

The trigeminocardiac reflex (TCR) is defined as the sudden onset of dysrhythmia, hypotension, apnoea or gastric hypermotility during stimulation of any of the sensory branches of the trigeminal nerve.

Risk Factors

- Hypercapnia.
- Hypoxia.
- Light GA.
- Age.
- Stimulus-duration or strength.
- Narcotics.
- Beta blockers.

Management

- Risk factor modification.
- Vagolytic agents.
- Peripheral nerve block.
- Careful CV monitoring.
- Treatment when it occurs.
 - (a) Cessation of manipulation.
 - (b) Vagolytics and adrenaline.

Conclusion

- Avoid abrupt and sustained traction of craniofacial structures.
- Administer regional nerve block.
- Glycopyrolate + lignocaine.
- Epinephrine.
- Continue cardiac monitoring.
- Cardiac massage.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 680

Hemodynamic Variable Changes to a Rapid Increase in Isoflurane or Sevoflurane Concentration During a Maintenance Phase of General Anesthesia in Maxillofacial Trauma Patients

Dr. Tejal Sanjay Badhan

Government Dental College and Hospital, Aurangabad

Abstract**Introduction**

Rapid increases in concentrations of isoflurane and desflurane in oxygen have been shown to increase sympathetic activity. Aim/objective of this study is to compare whether isoflurane or sevoflurane is better anesthetic agent in terms of hemodynamic changes.

Method

5 mg/kg of propofol for induction of general anesthesia and 0.2 mg/kg of vecuronium to provide muscle relaxation for endotracheal intubation. After induction of anesthesia and tracheal intubation, patients were assigned to one of two groups: ISO/SEVO and after tracheal intubation, the lungs were ventilated mechanically. In each group, the inspired concentrations of volatile anesthetics were maintained at 0.5 minimum alveolar concentration (MAC) for 15 min. The patients' lungs were mechanically ventilated with a semi-closed circle system at a fresh gas flow O₂:N₂O = 6:4 and controlled ventilation was set at 12 breaths per minute, with a tidal volume of 8 ml/kg. Systolic and diastolic arterial pressures, heart rate, end-tidal carbon dioxide concentration (PETCO₂), SpO₂ levels were measured. Fifteen minutes after endotracheal intubation, baseline measurements was taken. The inspired concentration of isoflurane or sevoflurane was then increased rapidly to 2.9 and the measurements were repeated at 0.5, 1, 1.5, 2, 3, 4, and 5 min.

Result/Conclusion

Sevoflurane is better anesthetic solution than isoflurane in terms of hemodynamic changes.

Reference

1. Wajima Z, Inoue T Changes in hemodynamic variables and catecholamine levels after rapid increase in sevoflurane or isoflurane concentration with or without nitrous oxide under endotracheal intubation. <https://doi.org/10.1007/s005400070001>

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 705

Hair Transplant

Dr. Chinmayee Chidanandini Kar

Institute of Dental Sciences

Abstract

Hair transplantation is one of the most rapidly evolving procedures in aesthetic surgery, accompanied by regular improvement in techniques. It is a procedure in which hair follicles are transplanted from one part of head to another part where the hair is thinning or receding. Hair loss affects millions of people worldwide and can have devastating effects on individual's psychological and emotional well-being. Hormonal changes post puberty—an increase in androgen is an important cause for male balding (ANDROGEN ALOPECIA). Treatment comprises of medical and surgical methods. The surgical technique consists of follicular unit graft i.e., follicular unit extraction and follicular unit transplant. The ability to provide very natural-looking results has encouraged larger number of balding men and women to opt for this surgical solution. With better methods of harvesting and implantation, hair transplantation results represent a blend of art and science. Newer advances like platelet-rich plasma, stem cells and laser has also further enhanced durability, health and appearance of hair transplants.

Keywords Hair transplantation, Follicular unit, graft, PRP.

References

1. Alopecia and techniques in hair restoration: an overview for the cosmetic surgeon. Joshi R, Shokri T, Baker A, Kohlert S, Sokoya M, Kadakia S, Epstein J, Ducic Y, Johnson RM. Oral Maxillofac

Surg. 2019 Jun;23(2):123–131. <https://doi.org/10.1007/s10006-019-00750-9> Epub 2019 Feb 21.

2. New-Generation Therapies for the Treatment of Hair Loss in Men. Sadick NS. Dermatol Clin. 2018 Jan;36(1):63–67. <https://doi.org/10.1016/j.det.2017.08.003> Epub 2017 Oct 12.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 901

Botox: Cosmetic and Functional Uses in Oral and Maxillofacial Surgery

Dr. Priyanka Barman, Prof. Dr. Pradeep Christopher Jesudas

Thai Moogambigai Dental College and Hospital

Abstract

Background

Botulinum toxin is a potent neurotoxin derived from Clostridium botulinum. It has been licensed for several functional and cosmetic uses. Its applications are based on the ability of the toxin to cause localized flaccid muscle paralysis. In 2002, the toxin was approved by the FDA under the brand name Botox for cosmetic use to treat glabellar frown lines. Currently, it is the treatment of choice for wrinkles in the upper third of the face. Its therapeutic applications include Hemimasticatory muscle spasms, temporomandibular joint disorders, or other causes of abnormal facial movements.

Aim and Objective

The aim of the study is to evaluate the effectiveness of Botulinum toxin-A in cosmetic and functional uses in Oral and Maxillofacial Surgery.

Material and Method

This study was conducted on 10 patients to see the effectiveness of botox in reducing wrinkle lines on glabellar and forehead region. Its functional application was also seen in 10 patients of hemimasticatory spasm. The patients were treated with injectable botox, and a regular follow up was conducted to check the efficacy and post-operative complications.

Result

Botox are a great resource for clinicians to improve a patient's appearance and provide therapeutic relief in several conditions in a short time with relatively little discomfort to the patient.

Conclusion

Surgeons will continue to work with these and more advanced products as they are approved. With proper training and experience, the surgeon should be able to provide treatments that consistently benefit their patients.

Keywords Botox, Facial aesthetics

Anil Neerukonda Institute of Dental Sciences

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 954

Oral and Maxillofacial Surgery During Covid-19 Era

Dr. Arpan Gorai

Sardar Patel Post Graduate Institute of Dental and Medical Sciences

Abstract

Introduction

COVID-19 has challenged the health care sector throughout the world and it went into a breakpoint during the second wave of COVID-19. As the world responds to this crisis with behavior modifications like social distancing, lockdowns, and quarantine of suspected cases, healthcare providers are at the frontline in the fight against the coronavirus. Meanwhile, the pandemic has deeply affected the delivery of services for patients in need of definitive treatment for maxillofacial trauma which leads to post-traumatic deformities presenting as malunion to us in post-COVID lockdown. There was also a plethora of mucormycosis cases that presented to us during the same time.

Aims and Objectives

This poster presentation aims to highlight the myriad of maxillofacial cases ranging from post-traumatic deformities to fungal infections that presented during the present COVID-19 era.

Methodology

All the variety of post-traumatic deformities and fungal infections which had direct/indirect impact from COVID-19 was included.

Results

All the post-traumatic cases were operated by using stereolithography models and refractured, realigned into anatomical position. Functional outcomes were improved postoperatively. All the fungal infections were treated by performing maxillectomy with clearance of fungal colonies with no evidence of fungal infection.

Conclusion

Future pandemics need appropriate organizational planning to deal with maxillofacial trauma or fungal infections to prevent secondary deformities. Making maxillofacial surgeons a part of hospital units helps in preventing such morbidities.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 956

Cervical Necrotizing Fasciitis: A Case of Containment preventing Escalation

Dr. Dannana Hima Madhuri

Abstract

Of the many complications of odontogenic infections, a rare one to make its way is necrotising fasciitis (NF) flareup of which requires special attention and stringent management. This poster reports a case of cervical necrotizing fasciitis (CNF) as a sequel of odontogenic infection in otherwise healthy, 43 years old male patient. An early diagnosis was made based on clinical presentation and by radiographic examination as Ludwig's angina prompting its management by incision and drainage with extraction of involved teeth under sedation and broad-spectrum antibiotic coverage. Patient experienced high grade fever and foul-smelling pus discharge with initiation of skin necrosis over neck region postoperatively. Wide debridement was performed and culture and sensitivity testing of intraoperative swab sample demonstrated methicillin-resistant strain of *Staphylococcus aureus* (MRSA) and *Pseudomonas aeruginosa*. Patient was managed using conservative approach in the form of administration of intravenous antibiotics, regular wound debridement and general supportive care. Delayed partial closure of wound performed with PRF and collagen membrane once marked and persistent clinical improvement was evident. This case elucidates how immunocompetent patient can be plagued by NF and how timely conservative management can prevent the severity of patient handicap and need of rehabilitation.

References

1. Abe, Masanobu, et al. Cervical necrotizing fasciitis of odontogenic origin in a healthy young patient without pre-systemic disorders. *Journal of oral and maxillofacial surgery, medicine, and pathology* 29.4 (2017).

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 958

Assessment of Knowledge of BLS amongst MDS Students in a Teaching Institute

Dr. Zenish Rameshbhai Bhatti

AMC-MET Dental College and Hospital

Abstract

Basic life support which was invented in 1960 is essential during cardiopulmonary resuscitation. In India, the research on knowledge regarding basic life support amongst dental students, dental specialists and staff is deficient. The objective of this study was to assess and compare the knowledge about basic life support amongst 2nd and 3rd year MDS students. The authors conducted a questionnaire study to compare and assess the knowledge of Basic Life Support in 2nd and 3rd year MDS students. The questionnaire was formulated after a thorough literature search. The questionnaire was validated and then sent to the students and the data was recorded and analyzed. It was found that the second years (N = 42) had low knowledge scores compared to the third years (N = 45). Out of the nine branches, participants belonging to the pedodontics department had the lowest score whereas those belonging to endodontics department had the

highest score. The study concluded that 3rd year MDS students had better knowledge about Basic Life Support than the 2nd year MDS students. However, the residents of oral and maxillofacial surgery had higher knowledge compared to the other branches.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1018

Emerging Trends-3D/4D/5D/6D Printing Models in Oral Maxillofacial Surgery

Dr. Shreyas Lokhande

Dr. D.Y. Patil Dental College, Pimpri, Pune

Abstract

Three dimensional (3D) printing is a method of additive manufacturing which involves the materials such as polymers or metals, deposited layer by layer to produce the 3D objects. 4D printing aims to create dynamic 3D patterned structure that are capable of transforming from one shape to another. The outcome of this technique are materials that are capable of undergoing motion criteria overtime. As most of the body's organs are in continuous movement, including structures in the oral cavity, the introduction of such materials as functional objects in medicine and oral maxillofacial surgery can be highly valuable. 5D printing is a new branch of additive manufacturing (AM), This technology is a new version of 3D printing which allows curved layers. It use less than 25% material than 3D printing and also provide a stronger complex design parts. 6D printing is combination of 4D and 5D printing techniques. This poster presentation will highlight the feasibility of rapid prototyping models in oral and maxillofacial surgery.

References

- Georgantzinos et al. Additive Manufacturing for Effective Smart Structures: The Idea of 6D Printing. *J. Compos. Sci.* 2021, 5, 119. <https://doi.org/10.3390/jcs5050119>
- Foresti et al. In-vivo vascular application via ultra-fast bioprinting for future 5D personalized nanomedicine. *Sci Rep* 10, 3205 (2020). <https://doi.org/10.1038/s41598-020-60196-y>

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1063

Effect of Music Therapy on Hemodynamic Change in Patients During Medical Intervention

Dr. Sangavi B.

CSI College of Dental Sciences and Research

Abstract

Aims and Objectives

Patients undergoing medical intervention are anxious and concerned about pain. Increased levels of preoperative anxiety can induce hemodynamic changes and is known to be associated with an increased need for intraoperative anaesthetics. In medical literature, music therapy is reported to be used as an effective non-pharmacological modality in bringing down anxiety in patients undergoing caesarean section and in cardiothoracic surgeries. This study compares hemodynamic changes and anxiety in patients undergoing medical intervention in music therapy group and control group.

Materials and Methods

58 patients undergoing medical intervention were divided randomly into two groups—group A (control group) and group B (music therapy group). The changes in systolic blood pressure, diastolic blood pressure, respiratory rate, pulse rate, oxygen saturation, operating time, pain using visual analogue scale and anxiety using Likert scale were analysed using paired t-tests.

Results

Music therapy shows positive effect on operating time ($p = 0.001$), pain ($p = 0.001$), anxiety ($p < 0.001$), blood pressure (0.001) and pulse rate ($p = 0.001$). However, no statistically significant difference was found in terms of the respiratory rate and oxygen saturation mean scores.

Conclusion

Music therapy can be used as non-invasive therapeutic intervention to reduce preoperative anxiety and physiological parameters in patients undergoing medical intervention and it also increases patient compliance which facilitates an un interrupted smooth execution of the treatment.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1066

Maxillectomy in Mucormycosis: Therapeutic or Ablation?

Dr. Rohansingh Chadha

Indira Gandhi Institute of Dental Sciences, Puducherry

Abstract

Covid-19 pandemic has given rise to numerous secondary complications, most devastating of them being, Rhinocerebral mucormycosis. Rhinocerebral mucormycosis is a rapidly progressing disease with a high mortality rate, which requires medical and surgical intervention. While medicinal management and reversal of underlying defects in host-defense remains the first line of management in treatment of mucormycosis, surgical debridement of the necrotic tissue becomes mandatory for effective penetration of anti-fungal agent. The assumed port of entry is through the nasal mucosa, allowing them to inoculate in the paranasal sinus, mainly in the maxillary sinus, causing further spread in the adjacent tissues causing blood vessel thrombosis, tissue necrosis and destruction of the bone. Now question arises that what level of surgical debridement is optimal? It is necessary to go for total maxillectomy, or partial maxillectomy, sub-total maxillectomy or even alveoloplasty depending on patient to patient for effective treatment. As these procedures have a devastating effect on Function, speech and

appearance of the patients. In my poster presentation, I want to share variety of mucormycosis cases with different clinical patterns of Ostemyelitic changes in maxilla and their surgical management.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1096

Cone Beam Computed Tomography: A Third Eye for Oral and Maxillofacial Surgery

Dr. Divya Singhal

SAIMS College of Dentistry Indore

Abstract

Background

The utility of cone beam computed tomography [CBCT] imaging in oral and maxillofacial surgery has seen a continuous increase in the past decade. CBCT has become a gold standard for imaging of the oral and maxillofacial area. CBCT was first developed for use in angiography. In 1998 MOZZO et al. reported the first CBCT unit, developed for dental use. The scanning software collects the data and reconstructs it, producing what is termed as a digital volume composed of three dimensional voxels (axial, sagittal and coronal) of anatomical data that can be manipulated and visualized with special software. Radiation exposure dose from CBCT is 10 times less than from conventional CT scans during maxillofacial exposure. Major use of CBCT examination in oral surgery practice include surgical extractions of third molars and impacted teeth, tracing of alveolar canals, implant planning, evaluation of cysts and tumors, fracture diagnosis, inflammatory conditions of jaws and sinuses, evaluation of TMJ, orthognathic surgical planning and follow up. Also, CBCT is highly sensitive in showing the location and size of the sialolith. CBCT overcomes limitations of both conventional CT, radiograph and provides accurate information. The practice of oral and maxillofacial surgeons has become more efficient and successful with CBCT, and will continue to benefit OMFS officers, if CBCT is judiciously used based on expected diagnostic gain cost to the patient and the radiation dose.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1102

Role of Indigenous Herbs on Wound Healing in Oral and Maxillofacial Surgery

Dr. Siri Shetty

Mr Ambedkar Dental College and Hospital

Abstract

Medicare cost estimates for acute and chronic wound treatments ranged from \$28.1 billion to \$96.8 billion worldwide. Wound healing remains a challenging clinical problem and correct, efficient wound management is essential as it involves multiple complications if not addressed properly. Various conditions may contribute to impaired wound healing, including infections, underlying diseases, and medications. Most of the time, western medicines are used to promote healing which along with benefits, causes many side effects. Hence, due to such shortcomings, the World seems to be gravitating towards the ancient Indian herbs for wound care. Numerous studies on the potential of indigenous products with anti-inflammatory, antioxidant, antibacterial, and pro-collagen synthesis properties as wound healing agents have been performed. Their medicinal properties can be contributed by the content of bioactive phytochemical constituents such as alkaloids, essential oils, flavonoids, tannins, saponins, and phenolic compounds in the natural products. Each bioactive agent may have a specific function in wound healing process. The use of natural products like Curcuma longa, vitamin E, honey, and sea cucumber, in promote wound healing and its mechanisms. Other agents like salt water based oral rinses alkalize the mouth (opposite of acidification, which is the pathogenic bacteria mechanism), making the oral environment to increase its pH balance. Furthermore, saltwater is astringent and speeds wound healing by reducing inflammation and contracting the tissues. These indigenous agents not only help in wound healing but are also used for pain relief. Oral mucositis has also been shown to improve with the introduction of natural agents like honey, ghee, aloe vera gel, and chamomile mouthwash. This review assesses the effectiveness of indigenous agents in wound healing and their further use in various oral surgical ailments.

Reference

1. Sen CK. Human wounds and its burden: an updated compendium of estimates.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1145

Facial Implants in Facial Recontouring Procedures

Dr. Titiksha Jain, Dr. Pratiksha Shetty

A.B. Shetty Memorial Institute of Dental Sciences

Abstract

Various pathophysiological changes are associated with aging which begins in the late third decade of life that leads to midfacial and lower facial ptosis, it must be taken into consideration in order to achieve proper diagnosis and thereby provide appropriate treatment for correction of defects of middle and lower face. Literature reveals various treatment options for mid facial rejuvenation which includes face-lifting procedures, injectable fillers, autologous fat, orthognathic skeletal surgery and facial implants. Out of all the modalities, facial implants are more advantageous as they come in vast array of shapes, sizes and materials which can be customized for each patient according to the each individual's need. Facial implants are unique in that they provide 3D augmentation. The major advantage of facial

implant is that they are permanent and will not descend/displace with the ongoing changes in soft tissue of ageing face. The aim to present this e poster is to highlight the importance and efficacy of facial implants in various facial recountouring procedure.

Reference

1. Joe Niamtull—Cosmetic facial surgery (2nd edition) 2018.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1220

Comparative Assessment of Follicular Unit Extraction and Follicular Unit Transplant Techniques for Correction of Moustache Alopecia in Cleft Lip Patients Using Macrophotography

Dr. Devarakonda Chandana Sri Sravya

Bapuji Dental College and Hospital

Abstract

The scar on the hair-bearing moustache area can be cosmetically disfiguring and affect the social life of adult male cleft patients. Providing a remedy for a cleft lip scar and alopecia is essential for the emotional and psychological wellbeing of young male patients who want to grow a moustache. Hair restoration surgery is a camouflage method for the scar and alopecia in male patients with a cleft lip. In this study, comparison and assessment of hair re-growth in the moustache region for the patients with secondary cleft lip scar following hair restoration using follicular unit extraction (FUE) and follicular unit transplantation (FUT) hair restoration techniques. In terms of Success of the grafts by assessing the growth by macro photography and visual analog scale. As of now the trending technique and less technique is follicular unit extraction is the best method to transplant moustache hair in the cleft lip male patients.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1243

Transoral Endoscopic Coblation Assisted Tongue Base Reduction Surgery In Obstructive Sleep Apnea

Dr. P. Velmurugan

Meenakshi Ammal Dental College and Hospital

Abstract

Multiple surgical measures aimed at improvement of tongue-base obstruction exist. A new transoral tongue base surgical procedure for the treatment of snoring and obstructive sleep apnea (OSA) is

described and it is named “Robo-Cob” technique. It is performed in patients suffering from moderate to severe OSA and with significant tongue base hypertrophy observed at preoperative drug-induced sleep endoscopy. In this procedure patients underwent tongue base tissue resection, starting resection by midline splitting of lingual tonsils starting from the foramen caecum down to the vallecula and removal of each side was done as separate specimen. Margins of lingual tonsil resections included the sulcus terminalis anterosuperiorly, the amygdaloglossus sulcus laterally, and the glossoepiglottic sulcus posteroinferiorly. This technique provided tongue base tissue specimens that allowed measurement of the volume that ranged from 5 to 17 cm³. It was found that resection of at least 10 cm³ of tongue base tissue was associated with better outcomes in terms of postoperative AHI reduction. Coblation technique for resection appear to be the short surgical time, the low postoperative tissue edema, and the possibility of providing tissue specimens to measure resected volumes.

References

1. Transoral Endoscopic Coblation Tongue Base Surgery in Obstructive Sleep Apnea: Resection versus Ablation. Ahmed Bahgat.
2. Transoral Robotic Glossectomy for the Treatment of Obstructive Sleep Apnea–Hypopnea Syndrome. Michael Friedman.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1358

Arthrocentesis versus Level 1 Arthroscopy in Internal Derangement of Temporomandibular Joint

Dr. Smit Harish Vithalani

Faculty of Dental Science, Dharmsinh Desai University, Nadiad, Gujarat

Abstract

Introduction

Internal derangement of the Temporomandibular Joint is defined as an abnormal position of the articular disc in relation with mandibular condyle and articular eminence presenting as disc displacement with or without reduction.

Methodology

This study was conducted on thirty patients diagnosed with internal derangement of TMJ consisting of 8 males and 22 females averaging 34.6 years. Two groups Conventional Arthrocentesis (Group A) and Level 1 Arthroscopy (Group B) consisted of 15 cases each divided alternately. Clinical evaluation parameters included VAS for pain, maximal interincisal opening, deviation on mouth opening, range of motion including lateral excursion and protrusion movements recorded at 1 week, 1 month and 6 months post-operatively. Wilke’s Staging according to MRI findings was recorded pre-operatively and 6 months postoperatively.

Results

At 6 month follow up, average reduction in VAS for pain and deviation on mouth opening was 72.43% and 24.73% in Group A and 77.66% and 65.41% in Group B respectively. Average increase in

MIO, right and left excursion and protrusion movements was 29.55%, 31.33%, 20.12% and 32.45% in Group A and 34.94%, 41.37%, 39.29% and 36.51% in Group B respectively. Improved results were obtained clinically for all Wilke's stages in both groups with more number of patients improving in Group B.

Conclusion

On comparing results, improvement was observed in various clinical evaluation parameters of both the groups at 6 months follow up. However, statistically significant, and better results were obtained for the Arthroscopy group.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1397

Subciliary Incision versus Weber Fergusson Incision in Treatment of Mucormycosis Involving Zygomatic Bone

Dr. Bhagya B. Trivedi

Govt. Dental College and Hospital Ahmedabad

Abstract

XXXX

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1398

Oral and Cranio-Maxillofacial Mucormycosis 2020: A Consequence of Covid-19?

Dr. Hitarthi Jogani

Abstract

A rapid rise in craniomaxillofacial Mucormycosis was seen post Covid 19 in India from August to July' 2021. The aim of this study was to explore the possible causative associations observed in these Mucormycosis cases.

Material and Methods

Over 550 cases, 70 in the first wave and 480 in the second wave were analysed. Associations were looked for with demographic variables, H/o hospitalization and steroid administration during covid infection, pre-existing medical conditions specially diabetes, H/o vaccination, extent of craniofacial involvement, surgical and medicinal therapy given, the mortality rate and recurrence.

Results

Out of 550 patients; 65% were male. The most common age group affected was 40–60 years, 77% patients reported H/O covid, 64% patients gave H/o hospitalisation, 70% patients were diabetic, 64.4% patient had received steroids, 8.18% of patients had received a single dose of vaccine, average D dimer level between 0.8 and 1.4 g/L. Only

the maxilla was affected in 63%, both the maxilla and zygoma in 19.63%, maxilla and orbital floor in 8%, 6.4% showed intracranial extension and 2.72% presented with mucormycosis of the mandible. Mortality rate was 5.09% and recurrence was noted in 7.6%.

Conclusion

Mucormycosis is generally observed in immunocompromised patients, post cancer or post organ transplant therapy. However a sudden outbreak of Mucormycosis in post covid-19 patients specifically who were hospitalised and received steroid therapy following which transient hyperglycemia occurred, shows a definite correlation between Mucormycosis and Covid-19.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1399

Submandibular Sialolith

Dr. John Vanlalrinawma Fanai

Government Dental College and Hospital, Ahmedabad

Abstract

XXXX

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1448

Oro Antral Fistula as a Sequelae of Maxillary Odontogenic Keratocyst

Dr. Mohanjee Pandey

Abstract

XXX

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1458

Piezoelectric Surgery in Oral and Maxillofacial Surgery

Dr. Jagjit Singh

Abstract
XXX

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1470

The Efficiency of Custom-Made Sub Periosteal Implants for Rehabilitation of Atrophic Jaws: A Case Report

Dr. Navneet Kaur Rehal

Abstract

One of the most controversial issues in modern implantology is undoubtedly the use of sub periosteal implants for the treatment of total and partial edentulism. Sub periosteal implants were one of the comprehensively used and studied implants in the past, before being abandoned in favor of endosseous implants. Well-designed sub periosteal implants have been reported to function successfully for many years. Most authors describe decent success rates for mandibular sub periosteal implants in cases with major bone atrophy but follow-up studies for maxillary sub periosteal implants are not available. The higher failure rate of maxillary sub periosteal implants was mainly claimed to be the difficulty of positioning maxillary implants on a cortical bone. New techniques for acquisition and new processing software, combined with the most modern fabrication techniques, have opened up new possibilities, including the customization of implant therapy using 3D printing. The aim of this poster is to report a case with an edentulous maxilla which was treated by custom made sub periosteal implants.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1517

Mucormycosis as a Sequelae of Covid-19: A Case Report

Dr. Siripuram Haritha

MNR Dental College and Hospital

Abstract

Several reports, primarily from India, describe cerebrofacial mucormycosis (Black Fungus) afflicting a large number of patients with active SARS-CoV-2 infection or shortly after treatment for COVID-19. As dexamethasone has become a standard of care for treatment of COVID-19, affected patients with underlying immunosuppression are left susceptible to secondary infections. It has been reported that an increasing number of diabetic patients in India have been afflicted with Mucor infections of the head and neck. India has the highest burden of Mucor worldwide and the second-largest number of diabetic patients aged 20–79. These factors, in addition to the recent rise

in COVID-19 infections, has led to a rapid increase in Mucormycosis cases. Optimal treatment of mucormycosis requires a multi-disciplinary approach utilizing IV antifungals, surgical debridement, and treatment of underlying disease processes that made the patient susceptible. The aim of this poster is to report a case of mucormycosis with a collaborative management by the Oral and Maxillofacial Surgery and ENT departments.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1523

Immediate versus Conventional Loaded Single Implant in Posterior Mandible: A Comparative Study

Dr. Srujana Tangella

MNR Dental College and Hospital

Abstract

BRANEMARK was the first published author to place a dental implant with primary stability in a submerged fashion so as to avoid movement during healing. The 2-stage healing protocol consisted placing implant with primary stability and then submerging them for an unloading healing period of 3–6 months before attaching a prosthesis. Results of edentulous patients restored with 2 stage healing protocol were promising success rate ranged anywhere from 95 to 99% over 6–15 years. Over time, the interest in immediate loading implants became patient driven. Histological evaluation of bone surrounding both immediately loading and conventionally loaded implants showed that not only was osseointegration possible with immediately loaded implants but also that there was an increase in quantity and quality of bone adjacent to these experimental implants. The aim of present study is to show the efficiency of immediate loaded implants in comparison to delayed loaded single implants in replacement of mandibular posterior tooth.

Category: Student: E-Poster

Theme: Miscellaneous

Reg. Num.: 1562

Vascular Anomalies of Head and Neck: An Enigma to Oral and Maxillofacial Surgeon

Dr. Katkuri Saideep

MNR Dental College and Hospital

Abstract

Background

Vascular anomalies are disorders of the endothelium and surrounding cells that can affect the vasculature and involve any anatomical

structure. Lesions are usually diagnosed during infancy or childhood and the estimated prevalence is 4.5%. In most instances these are caused by sporadic somatic gene mutations in tyrosine kinase receptor pathways responsive to vascular endothelial growth factor. The complexity in diagnosing and therefore managing the pathology has been largely due to its varied spectrum of presentation. Once the diagnosis is established, a variety of treatment modalities are necessary for its management, as vascular malformations can be recalcitrant to cure. Paramount in any treatment is the need to preserve function and not induce further morbidity.

Methodology

Current overview and management of vascular anomalies of head and neck were analyzed through a thorough electronic search across PubMed, Scopus, Google Scholar using appropriate keywords along with manual search of various journals and textbooks.

Conclusion

Vascular anomalies of the head and neck region are a complex group of lesions that challenge the head and neck physicians. Identifying vascular anomalies of the head and neck is most readily performed with US and MRI. It is important for radiologists to specify important anatomical details and to accurately classify malformation or tumor subtype to guide appropriate treatment. A multidisciplinary approach is essential for the adequate management of complex head and neck vascular lesions.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 140

Rhomboid Flap Closure for Odontogenic Oro-Cutaneous Fistula: A Case Report

Dr. Snober Singh

JSS Dental College and Hospital, Mysuru

Abstract

Introduction

Oro-cutaneous fistula is a rare condition, characterized by a pathologic communication between the oral cavity and the skin. The literature currently available talks extensively about the linear closure of the fistulas. However, no report to date has been presented on the use of a local flap for its closure. The aim of this novel case was to evaluate the results of a local rhomboid flap over a conventional linear technique for the closure of OCF.

Case Presentation

A case of orocutaneous fistula (OCF) in the mandibular right region of a young male aged 23 years. After complete clinical, radiological analysis OCF was surgically treated and closure was achieved using a local rhomboid flap.

Discussion

The conventional linear closure technique is widely accepted for the reason of being a relatively simple, faster, and easy. Subsequent depression in the operated site can remain as a major concern when using the technique to learn modality. But, chances of scar contracture with local rhomboid flap can be considered an ideal method for closure of larger OCF; eliminating the possibility of contracture as it replaces tissue with tissue. But it is sensible to highlight and dredge the few pitfalls of the rhomboid flap; such as being an expertise-

oriented procedure, time-consuming, and resultant outcome of a conspicuous scar due to multiple limbs of the geometry of its design.

Keywords Orocutaneous fistula, Closure, Local flap.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 169

Aggressive Ossifying Fibroma of Mandible in Paediatric Patient

Dr. Mehul Raghunath Bhoje

YMT Dental College and Hospital, Kharghar, Navi Mumbai

Abstract

Objective

Ossifying fibroma is a benign, but potentially aggressive, fibro-ossaceous tumor of the craniofacial bones. Clinically, it is a large asymptomatic tumor of aggressive appearance due to the bone destruction it produces. Although juvenile ossifying fibroma is an uncommon clinical entity, its aggressive local behavior and high recurrence rate mean that it is important to make an early diagnosis. It is also important to apply the appropriate treatment and to follow-up the patient closely over the long term.

Method

A rare case of an ossifying fibroma of mandible in a 5 year old girl who underwent surgical and reconstructive treatment is presented. The case described in this report is a good example of a large ossifying fibroma in the mandible that was successfully treated in this manner, initially complete excision with enucleation was done preserving the lower border but there was recurrence crossing the midline of mandible in few months so have to plan for total resection followed by free fibula flap. Sometimes, these tumors may reach a very large size. Such cases may require additional reconstructive surgery because of some aesthetic and functional problems, especially when teeth are removed.

Result

Esthetic and functional outcomes were satisfying and no recurrence of the tumor could be observed so far.

Conclusion

Thus we can conclude that complete removal of the tumor at the earliest possible stage is recommended owing to its high recurrence rate of 30–58%, followed by reconstructive surgery.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 201

Long Standing Ranula: A Case Report

Dr. Jerry Bastin

V.S. Dental College and Hospital, Bangalore

Abstract

Ranula is a form of mucocele resulting from retention or extravasation of saliva from the sublingual salivary gland. Sublingual gland is a predominantly mucous secreting gland. Ranula is also called mucous retention cyst and found in 0.2 per 1000 population are affected. It specifically occurs in the floor of the mouth. The term ranula is derived from the Latin word RANA which means “belly of frog”. The lesions in the floor of the mouth resemble the bulging underbelly of a frog so it's called ‘ranula’. Ranula is blue colored, domed shaped cystic swelling. The mucous retention phenomenon variety contains an epithelial lining whereas the mucous extravasation type is lined with connective tissue and is therefore more correctly called a pseudocyst. There are two clinical varieties oral ranula and plunging ranula. Oral ranula remain confined to sublingual space whereas plunging ranulas extend beyond it. Ranula often leads to misdiagnosis of other common pathology like dermoid cyst and cystic hygroma. The case presented here was a 27 years old female patient with swelling in the floor of the mouth since 20 years with difficulty in talking. MRI was done and diagnosed as dermoid cyst. However, surgical excision was carried out and cytology and histopathology confirmed it as ranula.

References

1. de Visscher JG, van der Wal KG, de Vogel PL. The plunging ranula: pathogenesis, diagnosis and management. *Journal of Cranio-Maxillofacial Surgery*. 1989 May 1;17(4):182–5.
2. Charnoff SK, Carter BL. Plunging ranula: CT diagnosis. *Radiology*. 1986 Feb;158(2):467–8.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 211****Post Covid Osteomyelitis in Maxillofacial Region: A Direct Observation of 25 Cases***Dr. Barnali Devi**HKE'S SS Nijalingappa Dental College, Kalaburgi***Abstract****Introduction**

Osteomyelitis of jaw in post COVID-19 phase has been reported in the literature by many oral and maxillofacial surgeons. It is of utmost concern, because of their complex diagnosis, severity, and increased mortality. The purpose of this poster is to emphasize the need of knowing the risk factors in the development of post COVID-19 osteomyelitis and early diagnosis of the same.

Case Presentation

The clinical symptoms are tenderness, mobility of teeth with pus discharge. There may be sinusitis and paraesthesia and presence of exposed necrotic bone. Diagnosis is mainly based on history, clinical examination and radiographs and histopathological examination.

Discussion

The development to osteomyelitis is mainly attributed to the interaction of a wide range of drugs used in the treatment of COVID-19 and compromised host immunity. It may be also, due to complexity of this disease with changes in the blood rheology, and other metabolic

changes. Procedures like extraction should be done cautiously in an aseptic manner to prevent surgical trauma that may compromise the local vascularity and provide the portal of entry to microorganism.

References

1. Sood R, Gamit M, Shah N, Mansuri Y, Naria G. Maxillofacial Osteomyelitis in Immunocompromised Patients: A Demographic Retrospective Study. *J Maxillofac Oral Surg*. 2020;19(2):273–82.
2. Sai Krishna D, Raj H, Kurup P, Juneja M. Maxillofacial Infections in Covid-19 Era-Actuality or the Unforeseen: 2 Case Reports. *Indian J Otolaryngol Head Neck Surg*. 2021; 17:1–4.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 217****Surgical Panacea in a Rare Case of IgG4 Disease: An Enigmatic Diagnosis in Maxillofacial Region: “Mysteries and Beyond”***Dr. Mrimingsi Kri**Government Dental College, Mumbai***Abstract****Introduction**

IgG4 is a group of fibro-inflammatory disease that affects a variety of organs producing tumor like effects. The diagnosis remains challenging mainly due to the rarity of the pathology with a global incidence of 0.1%. Accurate clinical, radiological, histopathological and immunohistochemical evaluation forms key to diagnosis with HPE elaborating storiform fibrosis and obliterative phlebitis being pathognomic to the disease.

Materials and Method

A 74 year old K/C/O Pulmonary Tuberculosis and COPD treated with complete course of ATT reported to this center with trismus and cheesy discharge from multiple cutaneous fistulae in the left pre-auricular region. There was H/O multiple failed surgeries ranging from sequestrectomy and masseter debulking including aggressive treatment of segmental resection of mandible without disarticulation and reconstruction with Pectoralis Major Myocutaneous Flap (PMMC) flap all of which revealed only chronic non-specific inflammatory tissue on HPE examination. Recurrent cheesy discharge raised suspicion and subsequent thorough HPE revealed storiform fibrosis indicating IgG4 disease. The surgical panacea that was decided was aggressive debridement till skull base, removal of the reconstruction plate and closure with existing PMMC flap along with steroid therapy.

Results

Uneventful outcome and cessation of pre-auricular discharge with improved mouth opening.

Discussion

Although the disease seemed to be Tuberculous Osteomyelitis of the Mandible, it eventually turned out differently. Detailed evaluation of the pathology is crucial since it can masquerade as multiple diseases.

References

1. Al-Khalili OM, Erickson AR. IgG-4 Related Disease: An Introduction. *Mo Med*. 2018 May-Jun;115(3):253–256. PMID: 30228732; PMCID: PMC6140155.

2. Avincsal MO, Zen Y. The Histopathology of IgG4-Related Disease. *Curr Top Microbiol Immunol.* 2017;401:45–60. https://doi.org/10.1007/82_2016_38 PMID: 27848036.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 231

Central Giant Cell Granuloma: A Perplexing Course in Pregnancy

Dr. Akash Sehgal

Army Dental Center (Research and Referral)

Abstract

Central giant cell granuloma (CGCG) is considered to be a benign, intraosseous, osteolytic lesion but there is considerable controversy regarding its etiology, true nature and remains unknown. The influence of pregnancy on CGCG of the jaws has been rarely discussed. The interesting feature of our case was the relationship of the aggressive tumor growth rate to the patient's pregnancy. CGCG lacks clinical and radiographical pathognomonic features to distinguish from common lesions occurring in this region. Histopathology remains the gold standard for its diagnosis. The influence of pregnancy can be confirmed with the detection of estrogen and progesterone receptors in the lesion. Clinically aggressive lesions necessitate aggressive therapy to prevent recurrences. This poster presents a case of a 32-year-old female with prodigious CGCG involving nearly two-thirds of the mandible during her pregnancy. virtual surgical planning (VSP) was performed for resection of the tumor and reconstruction with the Fibular bone graft. In summary, this case reports on a possible relationship between central giant cell granuloma exacerbated by pregnancy.

References

1. Littler BO. Central giant-cell granuloma of the jaw—a hormonal influence. *Br J Oral Surg.* 1979 Jul;17(1):43–6.
2. Csillag A, Pharoah M, Gullane P, Mancer K, Disney TV. A central giant cell granuloma influenced by pregnancy. *Dentomaxillofac Radiol.* 1997 Nov;26(6):357–60.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 240

A Case Report on Cyst of Maxillary Sinus with a Rare Etiology

Dr. Prajwal K.

Bapuji Dental College and Hospital

Abstract

Introduction

Surgical ciliated cyst is frequently reported in Asian populations, with inclusion in the bone of nasal or sinus mucosa. This appears as a delayed complication after surgery in the maxillary sinus, midface osteotomies, and traumatic tooth extraction and maxillary fractures. It has a high incidence in Japan and is detected in up to 20% of patients who have undergone a radical operation on the maxillary sinus, but quite rare in Western countries. Surgical ciliated cyst illustrates need for a meticulous surgical technique, proper management of complications, and routine long-term follow-up of patients undergoing any type of sinus surgery.

Case Report

The surgical ciliated cyst of the maxilla is a rare lesion. We report a case that occurred 15 years after a tooth extraction of upper right first molar in a Caucasian man. Aspiration biopsy was done and reveals inflammatory cell rich. A well-circumscribed radiolucency, fairly radio opaque structure in the antrum, separated from the unaffected part of the sinus was noted radiographically. Bone expansion was detected by CT scan. The lesion was completely excised, and upon histological examination, findings were consistent with surgical ciliated cyst. This lesion may present histologically different epithelial linings, but respiratory epithelium was the most frequent. Enucleation is the treatment of choice.

Conclusion

Surgical ciliated cyst, being a rare cyst, the treatment modality is enucleation.

Reference

1. G.T. Gregory, W.G. Shafer Surgical ciliated cysts of the maxilla: report of cases *J Oral Surg*, 16 (1958), pp. 251–253.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 243

A Case of Pediatric Mucormycosis: Magnificent Recovery Against the Odds

Dr. Faizal S.

PMS College of Dental Science and Research, Trivandrum

Abstract

Mucormycosis is life threatening angioinvasive infection that occurs due to the fungi mucorales. It affects various systems of the body including head and neck region, respiratory system, central nervous system, gastrointestinal system etc. Rhinocerebral mucormycosis is the most common type affecting the head and neck. In head and neck cases the mold gains entry through respiratory tract involving the nose and sinuses with further progression into orbital and intracranial structures. Mucormycosis is a rare but an acute and frequently fatal infection in young patients with type 1 diabetes mellitus (T1DM) with or without diabetic ketoacidosis (DKA). In diabetic patients, mucormycosis occurs as a destructive and potentially critical condition due to augmented availability of micronutrients and diminished defence mechanism of the body. Ketoacidosis in diabetes accelerates the fungal invasion by creating an acidic environment due to

increased glucose levels and the increased levels of free iron favouring fungal growth. Here I report a case of mucormycosis involving paranasal sinuses, cavernous sinus with temporitis and bilateral otomastoiditis, in an 11 year old child. She presented with the complaint of swelling of the right side of face since one month causing right exophthalmos. Her medical history revealed uncontrolled Type 1 Diabetes Mellitus (T1DM) with Diabetic ketoacidosis (DKA), fever and headache. Extraoral, intraoral and radiographic examination confirmed the diagnosis of right rhino-orbital-cerebral mucormycosis. Aggressive surgical debridement and anti-fungal therapy followed with an obturator placement was carried out. Silicon prosthesis for the orbit and maxilla will be planned according to her growth.

Conclusion

Hence I would like to conclude that prompt diagnosis and early surgical intervention will provide successful results even in aggressive form of mucormycosis.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 249

Central Giant Cell Granuloma Case Managed With Radial Artery Forearm Flap: A Report of a Rare Case

Dr. Tankala Prerana

Vokkaligara Sangha Dental College and Hospital

Abstract

Introduction

Central giant cell granuloma (CGCG) of the jaws is a benign, intraosseous, osteolytic lesion of debatable etiology. A case of an aggressive type of CGCG of the maxilla in an adult female patient with diagnostic and treatment challenge is presented.

Case

A 34 year old female presented to the department with a diffuse localized swelling on the left side of the jaw for almost 4 years. The intraoral examination revealed a swelling on left side of hard palate. On palpation, the surface was smooth with a bony crepitus. Incisional biopsy was taken which revealed Central Giant Cell Granuloma which was confirmed with radiological examination. She was operated and the primary tumor was excised followed by reconstruction with a free radial artery forearm flap.

Discussion

GCG as an entity was first described in 1953 as a benign lytic lesion that usually occurs in the jaw bones. The left-side, maxillary occurrence and radiological profile was consistent with previous reports. The incisional biopsy helped us narrow down the diagnosis to CGCG. This impelled our decision to perform surgical resection and primary reconstruction with free radial artery forearm flap. The result of the surgery was successful.

Conclusion

The successful management of a rare maxillofacial lesion in an adult is reported. The management choices and diagnostic algorithm in maxillary segment have been discussed.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 269

A Novel Way of Management of Mucormycotic Osteomyelitis of Maxilla

Dr. Simran Sangani, Dr. Ramakrishna Shenoi

VSPM Dental College and Research Centre

Abstract

Background

India has reported a surge in mucormycosis cases after the spread of covid 19 infection, mainly associated with poor glycemic control, use of systemic corticosteroids, immunocompromised, environmental conditions, excessive use of antibiotics and hypoxia. Osteomyelitis of the maxilla is rare due to its high vascular supply. Fungal osteomyelitis is rare, presents with sinusitis associated with diabetes mellitus. Here we discuss rare cases of mucormycotic osteomyelitis of right maxilla.

Aims/Objectives

Management of mucormycotic osteomyelitis of the maxilla by a conservative approach and debridement under GA.

Methodology

Sequestrectomy of right maxilla with thorough debridement under GA.

Results

Satisfactory functional outcome was achieved.

Discussion

Hereby presenting two cases of mucormycotic osteomyelitis of maxilla, Case 1: 46 year old female patient with a chief complaint of pain in the upper right back tooth region for the past 3 months, and past medical history of diabetes mellitus since 3 years under medications for the same and covid 19 infection 3 months back following which FESS and debridement was done. The intraoral examination revealed unhealed extraction socket with necrotic bone in the region of 15, 16, alveolar bone was soft in consistency, non tender with segmental mobility. histopathological and radiological reports confirmed the diagnosis of mucormycotic osteomyelitis of right maxilla. Case 2: 48 year old male patient with a medical history of diabetes mellitus since 3 months and covid 19 infection 1 month back with a chief complaint of pain in the right upper back tooth region. The intraoral examination revealed segmental mobility in the right maxillary region. The final diagnosis was mucormycotic osteomyelitis of right maxilla.

Conclusion

Thus we conclude that a rare occurrence of mucormycotic chronic osteomyelitis can be effectively managed by a conservative approach rather than going for a conventional aggressive management.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 273****A Bollixed Pathology: Case Report on a Fibrotic Lesion in the Oral Cavity***Dr. Aparna Rawal**Vokkaligara Sangha Dental College and Hospital, Bangalore***Abstract
Introduction**

Oral sub mucous fibrosis (OSMF) is a chronic progressive disease affecting oral, oropharyngeal, and sometimes oesophageal mucosa. It is characterized by progressive fibrosis of sub mucosal tissue. Pathogenesis of OSMF has been directly related to the habit of chewing areca nut. Malignant transformation has been reported in 7–12% cases of OSMF. Hypoxia, resulting from reduced vascularity, further promotes malignant transformation where hypoxia-induced factor is known to be a key factor.

Case Report

A 38 year old male patient presented with a 10 year history of progressive inability to open the mouth. He had habit of betel nut chewing for past 20 years. Intraorally blanching and dense fibrotic bands in buccal, palatal and retromolar pad areas, extending upto anterior faucial regions were noted. Interincisal distance at the time of presentation was 14 mm. He was diagnosed as a case of severe oral submucosal fibrosis. Surgical excision of fibrous bands and reconstruction using buccal fat pad was done. After 1 month patient reported with a proliferative growth on right and left buccal mucosa with reduction in mouth opening. A post laser fibrotomy was done and histopathological examination was done. Report revealed well differentiated squamous cell carcinoma. Supra omohyoid neck dissection was carried out.

Conclusion

Early detection is an important prerequisite for better prognosis of OSCC patients which relates favorably to OSF patients. Regional metastasis is reported among 34–50% of the patients at the time of diagnosis due to the asymptomatic nature of malignant lesions.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 274****Pleomorphic Adenoma: A Case Report***Dr. Sneha Susan Zachariah**PMS College of Dental Science and Research***Abstract**

Pleomorphic adenoma accounts for 45–75% of all salivary gland neoplasm. It can involve major as well as minor salivary glands. Among minor salivary glands (5–10% of cases) the palate lip, nasal cavity, pharynx, larynx and trachea are the most common sites. Diagnosis is made with biopsy along with histopathology. Wide excision with biopsy and removal of underlying extension of tumor is the treatment of choice. 24 years old carpenter presented with painless swelling in hard palate region for past 1 1/2 months. On examination 3 * 4 cm hard mass was found. Lymph nodes of head and neck and parotid gland revealed no enlargement. Surgery by wide excision was planned. After base line investigation surgery was done and the mass sent for histopathology. Biopsy reports showed Pleomorphic adenoma on unusual site. Dissection of salivary gland tumor is important as they have propensity to metastasize. Wide local excision along with biopsy is the method of choice. Proper surgical techniques are required to avoid recurrence.

References

1. Califano J, Eisele DW. Benign salivary gland neoplasms. *Otolaryngol Clin North Am.* 1999;32:861–873.
2. Luna MA. Salivary glands. In: Pilch BZ, editor. *Head and neck surgical pathology.* Philadelphia: Lippincott Williams & Wilkins; 2001. pp. 284–349.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 280****Fungal Osteomyelitis With Rhino-Orbital Mucormycosis: Introduction and Treatment Modalities Discussed***Dr. Arun Kummar**Sree Balaji Dental College and Hospital, Tamilnadu***Abstract
Introduction**

Concomitant fungal infection of mucormycosis and aspergillosis is an invasive, rapidly progressive and life-threatening fungal disease of the maxillofacial region involving the oral cavity, nose and paranasal sinuses of head and neck region. These are more common among immunocompromised patients. Attributable risk factors for such infections are uncontrolled diabetes mellitus; long term steroid therapy; hematological conditions; renal failure and AIDS. The occurrence was relatively rare before the outrage of COVID-19 infection with increasing incidence in young and immune-competent patients (BLACK FUNGUS). There are six clinical forms of mucormycosis, most common being the rhino-cerebro-orbital form caused by inhalation of spores into paranasal sinuses of susceptible individuals. Aggressive surgical debridement, along with anti-fungal drugs including extensive resection of involved maxillofacial structures along with rehabilitation of associated post-surgical defects are the commonly used treatment protocol.

Aim

To highlight the disease pattern, clinical pictures, risk factors, diagnostic methods, and possible treatment modalities of the disease.

Materials and Method

Patients reporting to the Oral and Maxillofacial Department of TMDCRC. Investigations done for covid vs non-covid patients, complete hematological, imaging CT/MRI were done before treatment planning.

Result

All the cases reported were successfully treated with a combination of surgery and chemotherapy, and are under follow-up for delayed rehabilitation.

Conclusion

Immunocompromised patients are vulnerable for fatal fungal infections. Effective management depends on early detection, diagnosis and extensive surgical resection of involved tissues with delayed rehabilitation preferably.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 290****Maxillary Carcinoma: A Clinical Paradox***Dr. Flora Kalita**Teerthanker Mahaveer Dental College and Research Centre***Abstract****Background**

Oral squamous cell carcinoma represents 90–95% of all the malignant neoplasms of the oral cavity. It's the most common epithelial neoplasm affecting tongue, floor of the mouth, buccal mucosa or gingiva and commonly present as a non-healing, exophytic or endophytic ulcer with associated local and regional pain. Oral squamous cell carcinoma is a disease with well-established risk factors. Early detection is an important criterion for achieving high cure rate. Occasionally it may be misdiagnosed because of its variable and innocuous clinical appearance. I'm presenting a case of maxillary carcinoma which was initially seen and treated in general practice as a gingival proliferative lesion.

Case Report

A 65 year old female patient reported with chief complaint of recurrent swelling in the upper right gingival region since one month. Patient gives a history of extraction of right maxillary first premolar followed by pus discharge from the extraction socket one month back. Recurrent swelling with pus discharge was found and was treated by incision and drainage followed by antibiotic prophylaxis. Incisional biopsy report suggests well differentiated squamous cell carcinoma. Hemi-maxillectomy and radicular neck dissection was done. Patient was further referred for radiation therapy.

Conclusion

A careful history and extraoral and intraoral examination as well as appropriate investigations should be undertaken for an accurate diagnosis. Managing head and neck cancer primarily involves accurately staging the disease and an early diagnosis is paramount to favorable outcome.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 291****Pleomorphic Adenoma of Palate: A Peek into its Molecular Biology***Dr. Gopika I. Manoj**PMS College of Dental Science and Research***Abstract**

Molecular profiling of malignant neoplasms has improved the treatment strategies and our understanding of the disease process. However, in depth knowledge of molecular biology of benign tumors is inadequate. Pleomorphic adenoma accounts for 60% of the benign salivary gland tumors. It is also the commonest minor salivary gland benign tumour accounting for 70% of all tumours. The most common site is hard palate followed by upper lip, buccal mucosa, tongue, floor of mouth, retromolar trigone. Even then, evidence regarding molecular profiling of pleomorphic adenoma is scarce. Pleomorphic adenoma is benign but has various expression changes, which may be a factor in the development of malignancy and metastasis. Karyotypic alterations of parotid pleomorphic adenomas have been studied since 1973. Fusion genes, such as PLAG1 and HMGA2 have been reported to be involved in its pathogenesis. Gene expression pattern revealed a distinct expression signature consisting of various up and downregulated transcripts. Knowledge of the molecular behaviour and disease spread can help us target genes responsible for the metastatic behaviour of the pleomorphic adenoma. Herewith the present poster aims at diving deep into the molecular biology of pleomorphic adenoma with the insight obtained by a case report and literature review on management of pleomorphic adenoma of hard palate.

References

1. Lida et al. Molecular profile of a pleomorphic adenoma of the hard palate. a case report. *Medicine (Baltimore)*. 2020 Jul 17;99(29):e21207.
2. Zemmouri Y et al. Pleomorphic adenoma of hard palate: a case report. *Pan Afr Med J*. 2021;38(146).

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 296****Intraosseous Epidermoid Inclusion Cyst: An Unusual Presentation in the Maxillofacial Region***Dr. Shiepra**Bapuji Dental College and Hospital, Davangere, Karnataka.*

Abstract

An epidermoid cyst is a benign cyst usually found on the skin. Intraosseous epidermoid cysts are rare benign epithelial inclusion cysts in the bone. The formation theories of the intraosseous epidermoid cysts are unclear. They represent the simplest expression of teratoma spectrum. They develop due to congenital or acquired factors. The former is thought to develop from congenital ectodermal tissue inclusion during embryonic development and the latter is due to traumatic implantation of the cystic cells in to underlying deeper tissues with subsequent cystic changes and expansion. Intraorally they are slow growing and painless entity. It is difficult to differentiate from other inflammatory and cystic lesions. They are rare usually appear in the distal phalanges of the fingers and the cranium. The reported incidence of epidermoid cyst in the oral cavity is 1.6%, most commonly seen in the floor of the mouth. Clinical behaviour of epidermoid cyst and odontogenic keratocyst is hard to distinguish. Treatment is simple curettage and grafting if the defect is large. There was an unusual presentation of an intraosseous epidermoid inclusion cyst of left mandibular ramus in our department that occurred with no trauma history. It was treated by enucleation and curettage. The epidermoid inclusion cyst should be considered in differential diagnosis of the radiolucent lesion of the jaw.

References

1. Loxha MP, Salihu S, Kryeziu K, Loxha S, Agani Z, Hamiti V, Rexhepi A. Epidermoid cyst of mandible ramus: case report. *Medical Archives*. 2016 Jun;70(3):238.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 300****Central Giant Cell Granuloma of Mandible: A Case Report***Dr. Olivia Dias**Bapuji Dental College and Hospital***Abstract**

The central giant cell granuloma was first described by Jaffe in 1953 as a giant-cell reparative granuloma of the jaw bones. Central giant cell granuloma (CGCG) is a benign lesion of the jaws with an unknown etiology. The lesions occur more frequently in females than in males and are more often located in the mandible than in the maxilla. The age of most patients ranges from 10 to 25 years. In most cases the lesion presents as a painless, slow growing swelling of the jaw but aggressive variants do exist. Pain and sensory disturbances are rare. Intraorally a swelling with sometimes a bluish-brown aspect can be observed. Displacement of teeth occurs frequently and can lead to a malocclusion. Radiological findings, small unilocular lesions to large multilocular lesions with displacement of teeth and tooth germs, root resorption, and cortical perforation. Histologically characterized by an abundance of evenly distributed multinucleated giant cells within a sea of spindle-shaped mesenchymal stromal cells, scattered throughout the fibrovascular connective tissue stroma containing areas of hemorrhage. Surgical curettage or, in aggressive lesions, resection, is the most common therapy. A case of a large destructive CGCG involving the left side of mandible, causing

extensive bony resorption, and buccal, as well as inferior border cortical expansion, in a young child is presented. It was treated successfully by enucleation and aggressive curettage followed by peripheral osteotomy preserving the continuity of the mandible.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 302****Salivary Gland Disorder: A Case Report***Dr. Basudha Mukherjee**Jaipur Dental College, Jaipur, Rajasthan***Abstract**

Sialolithiasis is a relatively common disorder of the salivary gland characterized by the development of calculi. (1) The salivary calculi are calcified structures also known as sialoliths, which consist of minerals like calcium phosphate, hydroxyapatite etc. The prevalence of submandibular gland sialolithiasis is 80%, 19% in the parotid and 1% in the sublingual glands. Submandibular salivary calculi are the most common, this is due to more viscous nature of the saliva, longer duct high mineral content in saliva. (2) Removal of calculi from the duct depends on the size and location in the duct. (1) Small sialoliths can be expelled out by milking the gland by local massaging or by the means of sialogogues like paraffin, citrus fruits and chewing gums. (2) If extra glandular stone than transoral sialolithotomy is preferred, if intraglandular endoscopic intracorporeal lithoclast which is better than lithotripsy or endoscopic assisted sialolithotomy is advisable. (1) We present a case of 36/F patient complaining of pain and swelling in the lower right face region. On examination a diffuse swelling was noted in right submandibular region. Overlying skin was normal. The swelling was not warm but mild tenderness was present. Swelling was bi-digitally palpable. USG showed 7.9 mm calculi in the right submandibular gland. Submandibular gland excision was done.

References

1. Sahu S, Vora S. Management of Sialolithiasis of Submandibular Salivary gland: A review.
2. Devadiga S, D'Silva J, Chalatadka M, Nair R. Submandibular sialolith in a geriatric patient: A case report.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 323****Post-herpetic Osteomyelitis: An Unusual Presentation***Dr. Bansari Ajagia, Dr. Rushit Patel**Narsinhbhai Patel Dental College and Hospital, Visnagar*

Abstract

Varicella zoster virus is responsible for causing chicken pox (varicella) and shingles. Herpes zoster (HZ) infection is caused by reactivation, owing to diminished host immunity. It resides dormant at the sensory ganglia (trigeminal ganglia in head and neck infection). Usual presentation of HZ infection is severe pain and unilateral distribution of vesicles along the distribution of affected nerve. Reports of spontaneous teeth exfoliation and osteomyelitis following HZ infection is infrequent and sporadic. Osteomyelitis may occur rarely after remission of acute phase of HZ infection. We report a case of osteomyelitis and spontaneous teeth exfoliation in the lower jaw after HZ infection. The subject gave history of HZ infection of mandibular branch of trigeminal nerve. He presented with teeth mobility and their subsequent exfoliation on the affected side after remission of the acute phase of the disease.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 327****An Unusual Gigantic Sublingual Epidermoid Cyst***Dr. Soubhik Pakhira**Dr. R Ahmed Dental College and Hospital***Abstract**

Dermoid and epidermoid cysts are developmental cystic malformations which are known as Dysontogenetic cysts epidermoid cysts can develop with autosomal dominant Gardner and Gorlin Syndrome. They are slow growing and asymptomatic. They constitute 1.6–6.9% of all cyst occurring in the head and neck region. Occurrence rate of epidermoid cyst in the floor of the mouth is around 0.01%. Recurrence is rare and malignant changes seen. Epidermoid cyst can be medial or lateral. When present medially it is located in submandibular, sublingual and submental region. It may occur as a result of entrapped ectodermal tissue of the first and second brachial arches which fuses during the third and fourth week in utero. An intraoral sublingual epidermoid cyst grows slowly but may enlarge and interfere with deglutition, speech and cause airway obstruction requiring immediate surgical intervention. The approach for surgical excision depends upon the location of the cyst. If located above mylohyoid muscle, intraoral approach is followed under local anesthesia. If located under geniohyoid muscle extraoral approach is followed. But intraoral approach provide good cosmetic and functional results. With proper investigation like ultrasound, CT scan and MRI and simple yet effective clinical procedure sublingual epidermoid cyst can be successfully diagnosed and managed without any complications.

Keywords Sublingual, Dysontogenetic cyst, Epidermoid cyst, Developmental cyst

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 336****Bone Morphological Changes in Conservatively Managed OKC: A Meticulous 5-Year Annual Follow Up***Dr. Manjari Singh**Chandra Dental College and Hospital, Lucknow***Abstract****Introduction**

In the recent era, there is a shift in the management of OKC, from aggressive resections to more conservative modalities are noticed. These conservative modalities arguably increase the risk of recurrence in such an aggressive lesion. This makes meticulous postoperative followup a very important factor to determine the success of the procedure. This 5-year annual study is aimed to evaluate the bone trabecular pattern and bone density radiographically in a patient with OKC who underwent enucleation with peripheral osteotomy followed by chemical cauterization.

Case Presentation

A 21-year-old female patient with OKC [parakeratinised] in the mandible involving the mandibular canal.

Discussion

Long-term follow-up is a challenge to access the success when such a lesion is treated conservatively. This kind of follow-up also gives a chance to observe the yearly progressive morphological changes that are occurring in the bone along with the year-wise trabecular changes in the affected site. In our case, we noticed that cortication of the previously decorticated mandibular canal started in the 2nd postoperative year. It took 1 year to notice the osteopenic bone density and trabecular pattern to appear radiographically which matured to the level of its surrounding bone by the end of the 5th year.

Conclusion

OKC treated with peripheral osteotomy and chemical cauterization, the bone formation rate is slower when compared to a normal bony defect.

References

1. Polak et al, Oct-Dec;56(4):433–436.
2. Amneet et al, Volume 4 Issue 1 (January–June 2020).

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 353****Mucormycotic Osteomyelitis of Maxilla: A Post COVID-19 Complication***Dr. Mounica Thirumalareddy*

Gitam Dental College and Hospital

Abstract

Everybody in the world including the health care sector has witnessed the devastating effects of COVID-19 infection. It is an enigma to say whether COVID-19 has gone for good or not, but has definitely presented as a challenge in itself for dental professionals. Complications have escalated especially at the end of the 2nd wave, probably due to various immunosuppressant drugs that have been used for its aggressive treatment. One of the most common and fatal aftermaths in patients has been Mucormycosis. This case highlights fungal osteomyelitis of maxilla and surrounding structures in a female patient, as an opportunistic infection which is a rare condition as a result of immunosuppressed state of a post COVID-19 patient, with raised levels of blood sugar and also due to steroidal therapy. Recent reports that have been published, show a rate of approximately 80.76% of such cases in maxilla, out of which 61.53% patients were found to be diabetic before diagnosis. This case presents post COVID-19 fungal osteomyelitis which is believed to be triggered by highly raised blood sugar levels in a patient who was not a known case of diabetes mellitus.

Keywords Covid-19, Mucormycosis, Immunosuppression, Steroid therapy, Diabetes mellitus, Osteomyelitis

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 374

Setrol Sclerotherapy in Management of Vascular Malformations in Maxillofacial Region: Our Experience

Dr. Pranil Jaiswal

Index Institute of Dental Sciences

Abstract

Background

Vascular malformations are conditions resulting in abnormal number, structure or position of the blood vessels and they remain difficult both diagnostically and therapeutically despite continued efforts over the decades. Imaging modalities for diagnosing VMs include magnetic resonance imaging (MRI; with or without intravenous gadolinium enhancement) to evaluate the relation of the lesion to the surrounding tissues. Sclerosing agents (e.g. sodium morrhuate, Polidocanol, sodium tetradecyl sulfate) are the substances causing a marked tissue irritation or thrombosis, subsequent local inflammation and tissue necrosis, are now used for the management of these malformations.

Aim and Objective

To evaluate the effectiveness and complications associated with intralesional Setrol injections alone in vascular malformations of maxillofacial region.

Material and Methods

To evaluate the effectiveness and complications associated with setrol injection, a prospective study was performed on 3 patients. The

diagnosis of vascular malformation (VM) was made by the combination of clinical presentation, Doppler ultrasound and MRI. Sclerotherapy was done by directly injecting 2 ml of Sodium Tetradecyl Sulfate using 26 gauge syringe twice at 2 weeks of interval into the identified sinusoids after local anaesthesia infiltration.

Results

A decrease in the size of lesion was apparent after each session, with complete resolution. Follow up at 5 months showed no recurrence of the symptoms in any of the cases.

Conclusion

Treatment by direct intralesional injection of STS allows for conservative anatomic and functional recovery. It is relatively noninvasive and safe when the anatomy and clinical status permit its use.

Keywords Sclerotherapy, Vascular malformation

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 395

A Rare Case of Polydactyly Associated with Developmental Cyst of Anterior Maxilla: A Feature of Orofacial Digital Syndrome

Dr. Sandeepa Datta

Sardar Patel Post Graduate Institute of Dental and Medical Science

Abstract

Incidences of various cysts and tumors of the jaw bones are routine findings in the department of Oral and Maxillofacial Surgery. Occurrence of other clinical and systemic findings along with a cyst of the jaws, indicate presence of a rare syndrome in the patient, which is rather uncommon. Polydactyly, inherited as an autosomal dominant trait, is a condition in which an infant is born with one or more extra fingers or toes. It is most commonly seen in hands, mostly presenting as duplication of thumb and central finger being the least affected. Dentigerous cyst is the most frequent type of odontogenic cyst found surrounding the crowns of impacted, unerupted, developing or developed teeth, often displacing them into new ectopic positions. This case highlights a 17-year-old female presenting with striking features of bilateral symmetrical polydactyly with 7 toes including duplication of thumb and central toe, associated with relatively flat nasal bridge, hypertelorism and concomitant occurrence of a dentigerous cyst, associated with impacted left canine. Orofacial Digital Syndrome has an estimated incidence of 1 in 50,000 to 2,50,000 and is a generic term for group of apparent distinctive genetic diseases, that affect the development of the oral cavity, facial features and digits. The confluence of the all the above features suggest that the patient was a syndromic case most likely to be a case of Orofacial Digital Syndrome.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 397****Post Covid Invasive Aspergillosis: A New Clinical Entity***Dr. Rajveer Singh Arora**Index Institute of Dental Sciences***Abstract****Introduction**

Aspergillosis is a fungal infection characterized by invasive and noninvasive variations. Localized invasive infection of damaged tissue may be more extensive infection often evident in immunocompromised patients. Occurrence of invasive fungal respiratory superinfections in patients with COVID-19 has gained increasing attention. Yet, description of acute invasive fungal sinusitis with its management in those patients is still scarce. The aim is to describe this recently increasing clinical entity in relation to COVID-19 patient. Its incidence in recent years has shown a marked increase and it is believed to account for many cases of nonspecific sinusitis.

Case Reports

The purpose of this poster is to report two cases of aspergillosis involving the maxillary sinus in immunocompetent patients with an emphasis on early diagnosis because delay in the initiation of treatment can be life-threatening due to the propensity of fungi to invade adjacent blood vessels and embolize to distant organs.

Discussion

Clinical suspicion of acute invasive fungal sinusitis among COVID-19 patients and early management with antifungal therapy and surgical debridement is essential for better outcomes and higher survival.

References

1. El-kholy NA, El-fattah AMA, Khafagy YW. Invasive Fungal Sinusitis in Post COVID-19 Patients?: A New Clinical Entity.
2. Tarun Taneja, Susmita Saxena, Anita Pandey, Vishal Bansal, and Pooja Aggarwal. Aspergillosis Involving the Maxillary Sinus-A Report of Two Cases and A Brief literature Review.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 400****Heterogeneity of Parotid Neoplasms***Dr. Prachi Dinkar Patil**ACPM Dental College***Abstract****Introduction**

Tumors of the salivary glands constitute a heterogenous group of lesions of great morphologic variation. The parotid gland is the most prevalent salivary tumor site, accounting for about 80–85% of salivary gland tumors, about 80% of these tumors are benign, and the remainder are Malignant. We report a series of cases which presented to us and their effective management and a review of it.

Case Presentation

In this poster we discuss a case series of nine patients with near to similar clinical findings possessing a diagnostic challenge and treatment plan.

Discussion

In the last 5 years from 2017 to 2021 our institute reported nine cases with parotid swelling. Out of these six patients reported were male and three patients reported were female. Wide local excision of lesion was planned for these nine patients on clinical and radiological involvement. Four patients underwent modified radical neck dissection along the with wide local excision of the lesion. The histopathological diagnosis accounted for pleomorphic adenoma, Mucoepidermoid carcinoma, spindle cell carcinoma, adenoid cystic carcinoma, adenocarcinoma and round cell tumor of parotid gland.

References

1. Eveson JW, Cawson RA. Salivary gland tumours. A review of 2410 cases with particular reference to histological types, site, age and sex distribution. The Journal of pathology. 1985 May;146(1):51–8.
2. Galdirs TM, Kappler M, Reich W, Eckert AW. Current aspects of salivary gland tumors—a systematic review of the literature. GMS Interdisciplinary plastic and reconstructive surgery DGPW. 2019;8.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 411****Ameloblastoma***Dr. Chinmayee Palande**J.M.F'S A.C.P.M Dental College and Hospital***Abstract**

Ameloblastoma is an odontogenic tumor that represents 1% of all tumors of oral cavity. There are four types of benign ameloblastoma. Solid or multicystic ameloblastoma is the most common sub type of ameloblastoma. Ameloblastoma is characterized by aggressive and high recurrence rate. Well planned surgical treatment gives best results with low recurrence rates. Treatment of ameloblastoma depends on size and location of the lesion, histopathological diagnosis, reconstruction techniques and last but not the least surgeon's experience. The optional surgical treatments of ameloblastoma is to minimize its recurrence, restore near form and functions with esthetics and less morbidity of donor site. The objective of this presentation is about surgical treatment to decide whether to go for conservative or radical management of ameloblastoma. This is about two cases of ameloblastoma which are performed in our department,

where one is treated radically and other is conservatively. One was young age patient who had unicystic ameloblastoma was treated conservatively by enucleation and with Carnoy's solution. The other was an old age patient who had ameloblastoma treated by radical resection of mandible with recon plate fixation. Both the cases have recovered well and show good healing. Long term follow up for possibility of recurrence is must. Always a definite surgical treatment criteria and design for management is recommended for better outcome.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 423

Mandibular Mucormycosis in a post COVID patient: A Rare Case Report

Dr. Mamatha Bunga

Malla Reddy Dental College for Women

Abstract

Background

Mucormycosis has been on a surge in recent times affecting individuals who are in a state of immunosuppression with the preeminent cause being COVID-19 infection. Although the rhino-orbito-cerebral-maxillary has been the most common form of the disease, there are a handful of reported cases in the literature describing mandibular mucormycosis.

Case Presentation

We present a case of 59 year old male who reported to the Department of Oral and Faciomaxillary Surgery (Dentistry Department), AIIMS Patna with a chief complaint of gingival swelling and mobility of teeth in the left side of the mandible. There was a history of COVID 19 infection and surgical debridement of the maxilla. After detailed examination, the provisional diagnosis was made as recurrent mucormycosis of the mandible, and the patient was planned for surgical debridement followed by a histopathological and microbiological examination which confirmed the presence of mucor in mandible.

Discussion

Mucormycosis has gained wide attention in the last year since its outbreak. Affecting all the systems of the human body maxillofacial surgeons have been in the contact with the rhinomaxillary form mainly. Although rare mandibular mucormycosis may present to maxillofacial surgeons and can be easily misdiagnosed, the intent of this poster with this case presentation is to throw light over mandibular mucormycosis, its suspected etiopathogenesis and treatment protocol.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 431

Pleomorphic Adenoma of Hard Palate: Uncommonly Common Tumour

Dr. Vivek Kumar

All India Institute of Medical Sciences Patna Bihar

Abstract

Pleomorphic adenoma (PA) can be defined as a benign mixed tumour composed of epithelial and myoepithelial cells arranged with various morphological patterns, demarcated from surrounding tissues by fibrous capsule. It is the most common neoplasm of the large salivary glands and affects mostly the parotid gland. It also affects the minor salivary gland and accounts for 40–70% of all tumours. In intraoral minor salivary glands, PA affects most commonly the palate (42.63%), followed by the lip (10%), buccal mucosa (5.5%), retromolar area (0.7%), and the floor of the mouth. Majority of the lesions are seen between 4 and 6th decades of life, and is most commonly seen in females. Palatal pleomorphic adenoma presents clinically as a painless, slow-growing mass. A benign pleomorphic adenoma may degenerate into a malignant tumour. Simple enucleation of this tumour has a high local recurrence rate and thus treatment is wide local excision with the removal of periosteum or bone if they are involved. We would like to present a poster on the various clinical presentation of the tumour including preoperative diagnosis/differential diagnosis, different surgical approaches and report of a case.

References

1. Rahnama, M., Orzedala-Koszel, U., Czupkalo, L. 2013. Pleomorphic adenoma of the palate: a case report and review of the literature. *Contemporary Oncology*, 17(1), p.103.
2. Sharma, Y., Maria, A. 2011. Pleomorphic adenoma of the palate. *National journal of maxillofacial surgery*, 2(2), p.169.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 434

Nasopharyngeal Angiofibroma: Benign but Aggressive

Dr. M.P. Shraddha Krishna

M S Ramaiah University of Applied Sciences

Abstract

Nasopharyngeal angiofibroma is a highly vascularised locally destructive and histologically benign tumour with a characteristic aggressive nature in the head and neck region and has 0.05–0.5% occurrence among all other head-neck tumours with a clinical

presentation as painless unilateral nasal obstruction, epistaxis, and nasopharyngeal mass. It is rare and highly predominant in adolescent males with questionable pathogenesis associated with testosterone hormones in males. Radiographically seen as nasopharyngeal mass extending into nasal and paranasal sinuses, infratemporal region, orbit, and cranium. Proper diagnosis is achieved by detailed clinical examination, radiography, and specialized imaging techniques (CT, MRI) regarding treatment it is typically treated with preoperative embolization followed by surgical resection of the nasopharyngeal mass.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 436

Central Giant Cell Granuloma of Maxilla: A Rare Case Report

Dr. Ayyagari Manaswini

Krishnadevaraya College of Dental Sciences

Abstract

Introduction

Central giant cell granuloma is a non-neoplastic proliferative lesion of an unknown etiology. It occurs most commonly in the mandible than in maxilla. Also, it is more common on the right than the left side with females having more predilection than males in the ratio 2:1 and in young under 30 years of age.

Case Report

It was totally in contrast with our case, wherein left maxilla was involved in a male of 54 years of age.

Discussion

Conventional management is surgical and consists of enucleation and curettage and alternative therapies included are injection of corticosteroids in the lesion or subcutaneous administration of calcitonin or interferon alpha. Surgical curettage is not a very effective treatment for CGCG, especially not in aggressive lesions due to high recurrence rate. Aggressive CGCG includes treatment consisted of surgical resection with 0.5-cm margins of healthy tissue. In this case we have done partial maxillectomy by preserving palatal mucosa, which provided better healing and contouring of the tissue and helped for proper rehabilitation with the maintenance of the esthetic and function.

References

1. Gupta M et al., Central giant cell granuloma of the maxilla, BMJ Case Rep 2013.
2. de Lange et al., Central giant cell granuloma of the jaw: a review of the literature with emphasis on therapy options, Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2007;104:603–15.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 438

Odontogenic Myxoma: Breaking the Rules: For a Cause

Dr. Lohiya Shivani Laxminarayan

JMF'S ACPM Dental College and Hospital, Dhule

Abstract

Odontogenic myxoma (OM) is a benign, locally invasive and aggressive, non-metastasizing neoplasm of the jaw bones. It presents as a slow growing tumor consisting of an accumulation of mucoid ground substance with little collagen, the amount of which determines whether it can be called a myxofibroma. They can be found in both the maxilla and mandible, usually associated with a tooth germ. It occurs mostly in the second or third decades of life and affects mainly the posterior mandible. OM is associated with a high rate of recurrence, due to its gelatinous nature and the absence of a capsule. Prolonged clinical and radiological surveillance is therefore mandatory. Immediate reconstruction is not usually advocated because of its high recurrence rate. This is a case report of a 24 year old female diagnosed with odontogenic myxoma of mandible right side. She underwent segmental resection with immediate reconstruction with free fibula graft.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 456

Adenomatoid Odontogenic Tumor of the Mandible Arising from Dentigerous Cyst: A Case Report

Dr. Mohamed Azharudeen S. A., Dr. Babin C. B.

Government Dental College, Kozhikode

Abstract

Introduction

The adenomatoid odontogenic tumor is a hamartomatous benign neoplasia of odontogenic origin. It appears mostly in young patients and females, the maxillary region being the most affected. It is a slow-growing, asymptomatic lesion. It is related to non-erupted teeth, mainly canines and premolars. Lesions of this type can be clinically classified as a follicular, extrafollicular and peripheral lesions. The treatment for these lesions is enucleation and curettage of affected area.

Case Presentation

We report a case of the adenomatoid odontogenic tumor (AOT) in the mandibular right region of in a young female aged 18 years. After complete clinical, radiological and histopathological analysis surgical enucleation of the tumor was planned and carried out.

Discussion

AOT is a relatively uncommon distinct odontogenic neoplasm in the mandible. The radiographic findings of AOT frequently resemble other odontogenic lesions such and is rightfully called as Perfect imitator of dentigerous cyst. It should be a part of differential diagnosis whenever we encounter a lesion in young patients with unerupted tooth (Two Third Tumor). The final diagnosis is based on histological findings.

Keywords Adenomatoid, Odontogenic tumor, Mandibular, Uncommon, Case report

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology**

Reg. Num.: 468

The Mouth–Mirror–Milestones

Dr. Nabeel Malim

YMT Dental College and Hospital, Kharghar

Abstract**Introduction**

One of the biggest milestones is to be able to discover life threatening conditions at an early stage and to be able to treat it, making a turning point in many lives. Quoted here are cases which were first attended and treated by our department that ultimately paved a way to unveil underlying conditions present surreptitiously in the body.

Discussion

This poster highlights some of the rare systemic conditions which was originally noticed and operated by us, disclosing the underlying dreadful diseases like Tuberculosis, Burkitt's lymphoma, Hodgkin's lymphoma, Langerhans cell histiocytosis, Metastatic tumours, HIV Lymphoma, Malignant melanoma, Neurofibroma, Rhabdomyosarcoma involving various areas like the soft palate, hard palate, tongue, oral mucosa, gingiva and dentition, marking a milestone in the progression of disease and treatment plan.

Conclusion

Thus, an awareness is required about potential reflection of our oral cavity and its presentations of life threatening systemic diseases which could be treated and managed well if recognized and attended earlier.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology**

Reg. Num.: 470

Gorlin Goltz Syndrome

Dr. K. Nikitha, Dr. Arun Kumar K.

Tamilnadu Government Dental College and Hospital

Abstract**Background**

Gorlin-Goltz syndrome is an inherited autosomal dominant and an infrequent multi-systemic disease, affecting the 1st, 2nd, 3rd, decades of life. Gorlin-Goltz Syndrome is also known as: basal cell nevus syndrome, nevoid basal cell carcinoma syndrome, multiple basal cell carcinoma syndrome, jaw cyst bifid rib basal cell nevus syndrome, nevoid basalioma, odontogenic keratocysts skeletal anomalies syndrome. Gorlin-Goltz Syndrome is typically characterized by a classical triad comprising of multiple basocellular epitheliomas, keratocysts in the jaws and bifid ribs.

Case Report

A 26 year old male patient reported to our department with a complaint of swelling and pus discharge from the lower posterior region of the left side of jaw since 2 months. Extra oral and intraoral clinical examination, histological investigations along with CECT brain, face and neck and chest x-ray helped in diagnosing the condition. All the cystic lesions of the jaw were enucleated, peripheral ostectomy was done and chemical cauterization by Carnoy's solution was done. Patient is under routine follow-up and there is no evidence of recurrence till date.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology**

Reg. Num.: 477

Central Ossifying Fibroma of the Mandible: A Case Report

Dr. Annaluru Sri Sasank Tejaswee

Kalinga Institute of Dental Sciences, Bhubaneswar

Abstract**Background**

Central ossifying fibroma is a benign slow-growing tumor of mesenchymal origin and it tends to occur in the second and third decades of life and for the mandibular premolar and molar area. Central ossifying fibroma usually presents clinically as a painless and expansile spherical or ovoid jawbone mass that may displace the roots of adjacent teeth and causes root resorption. Central ossifying fibroma (COF) is the most common benign fibro-osseous neoplasm of the oral and maxillofacial region.

Case Presentation

A 14-year-old male patient presented with a chief complaint of pain in the vestibular region of the right mandible molar region. An incisional biopsy of the lesion was performed and based on the clinical findings, radiographic evaluation, and histopathologic features, a diagnosis of COF was confirmed.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 478****Odontogenic Keratocyst, Who's Remnant Will Never Give Up***Dr. Neha Kriti**Kalinga Institute of Dental Sciences***Abstract**

Odontogenic keratocyst (OKC) is an enigmatic developmental cyst that has aggressive behaviour and high recurrence rate. This diverse group of lesion exhibit varying presentations ranging from a small innocuous lesion which may be detected accidentally or may present as a highly aggressive and destructive lesion that may even transform into malignancy. OKC is the cyst arising from the cell rests of dental lamina. It can occur anywhere in the jaw but commonly seen in the posterior part of mandible. Keratocyst possess outpouching and microscopic daughter cysts from which recurrences may occur. Following is the case of OKC involving ramus of mandible of left side.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 479****“Dredging”: Advanced Approach in Conservative Surgical Management of Extensive and Recurrent Tumors: A Case Report***Dr. Darshan Shriprasad Wable**Bhart Vidyapeeth Dental College Sangli***Abstract****Introduction**

Odontogenic tumors such as ameloblastoma, if untreated can cause extensive tissue damage. Management with aggressive resection has been the principal treatment. This poster is on “DREDGING”, a new upcoming concept in conservative approach of ameloblastoma.

Case Report

A 14 year old male patient with the complaint of swelling in the lower jaw since 1 year reported to department of Oral and Maxillofacial Surgery was diagnosed with follicular ameloblastoma of mandible. It was treated conservatively with enucleation and dredging.

Discussion

Management of ameloblastoma with aggressive resection has always been the principal treatment option rather than simple enucleation and curettage procedures due to their high recurrence rate. Considering factors like age, nature, site and extension of lesion, complications like deformity, dysfunction, psychological distress. etc. cannot be disregarded. “DREDGING”, a new upcoming concept in conservative approach for eliminating tumor cells completely with

simultaneous bone formation, has satisfied the goals of correcting the deformity, achieving function and restoring contour.

Conclusion

Dredging technique has shown no recurrence and shows better bone regeneration. So, this technique can be considered as a conservative treatment for recurrence prone tumors.

References

1. Tajrin A, Ruslin. The Recurrence Rate of Oral Benign Lesions which Treated with Dredging and Obturator. 2020;11(10):36–9.
2. Yamada T, Ohiro Y, Dredging Method-Conservative Approach for Treatment of Keratocystic Odontogenic Tumor. Journal of Oral and Maxillofacial Surgery. 2014 Sep 1;72(9):e133.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 486****Unusual Presentation of Pyogenic Granuloma: A Case Report***Dr. Palle Kaveri**Government Dental College and Hospital***Abstract****Introduction**

Pyogenic granuloma is a reactive hyperplasia causing etiopathological enigma which appears in response to various stimuli, of which low grade local irritation and traumatic injury being the commonest suspected causative factors.

Case Report

A 25 year old male patient diagnosed with pyogenic granuloma at a rare site (chin region) and size with history of symphysis fracture. Patient developed an extraoral growth post trauma which upon surgical excision resulted in recurrence with rapid growth and intermittent bleeding. It when treated with sclerotherapy followed by cryotherapy showed complete healing with no recurrence.

Discussion

Pyogenic granuloma is relatively common benign mucocutaneous lesion occurring intraorally with rarely extraorally. Clinically these usually present as a single nodule or sessile papule with smooth or lobulated surface and may range from few millimeters to several centimeters. Intraoperative bleeding, postoperative infection, recurrence chances are more with the surgical technique. Sclerotherapy with the use of warm saline and cryotherapy with liquid nitrogen have evolved as an effective alternative approach, which is simple, non invasive, with minimal discomfort, little recurrences and fewer complications.

Conclusion

This case report is an attempt to highlight the usefulness of sclerotherapy and cryotherapy in the management of recurrent pyogenic granuloma particularly involving the esthetic zones.

References

1. Lee, Sinno, Treatment options for cutaneous pyogenic granulomas. Journal of plastic, reconstructive & aesthetic surgery.2011Sep 1;64(9):1216–20.
2. Bansal, Jain, Cryosurgery in the treatment of oro-facial lesions. Indian Journal of Dental Research.2012 Mar 1;23(2):297.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 488

A Solitary Phlebolith in the Buccal Mucosa: Report of a Rare Entity and Clinicopathologic Correlation

Dr. Alugubelli Tarunya

Government Dental College and Hospital, Hyderabad

Abstract

Pathological conditions can give rise to calcifications within oral mucosa representing either a local or systemic disturbance. Inflammation, trauma, debris acting as nidus and vascular lesions have been attributed as principal causes for occurrence of calcifications within the oral mucosa. The soft tissues of the cheek rarely contain lesions that include calcifications. Among them, phleboliths associated with vascular lesions are the most frequent. Isolated occurrence of phlebolith in oral mucosa though very rare, especially without any underlying vascular lesions, can be diagnostically challenging. Either a traumatic association at that site or a haemangioma of childhood that has regressed once the individual became an adult are the possible explanations suggested for the occurrence of these unique solitary phleboliths. There is a high propensity for misdiagnosing solitary phlebolith located in sites like the buccal mucosa where various other pathologic soft-tissue calcifications, such as sialoliths, calcified lymph nodes, traumatic myositis ossificans, etc. can occur. Histopathological examination with routine haematoxylin and eosin staining alone may not be sufficient to determine the accurate diagnosis. Allied clinical history and immunohistochemistry can aid to arrive at the final diagnosis. We report such a case of nonvascular lesion-associated solitary phlebolith in the right buccal mucosa of a healthy 49-year-old male patient and discuss its differential diagnosis with emphasis on histological presentation.

References

1. Kato H, Ota Y, Sasaki M, Arai T, Sekido Y, Tsukinoki K. A phlebolith in the anterior portion of the masseter muscle. *N Tokai J Exp Clin Med* 2012 Apr 20;37(1)

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 496

Chronic Suppurative Osteomyelitis of Right Maxilla

Dr. Akshay Thilak R.

Coorg Institute of Dental Sciences

Abstract

Introduction

Osteomyelitis of the maxilla is now a rare event with the advent of antibiotics. The two predominant causes are odontogenic infections and sinusitis. Immunocompromised states such as diabetes, HIV, and malnutrition increase the risk of osteomyelitis. It is important to recognize this early as it is a difficult entity to treat with potentially serious consequences. A 52-year-old male came to our ORAL AND MAXILLOFACIAL SURGERY DEPARTMENT complaining of pain and Pus discharge from right Buccal vestibule since 3 months, there was mobility of maxillary second molar tooth, associated with bone exposure (sequestrum) in the right first molar region on the Buccal aspect. CBCT of right maxillary bone showed areas of bone loss in the maxilla around the first molar. Sequestrectomy was planned under general anaesthesia with endotracheal intubation to remove the lesion totally as the final treatment.

Keywords Osteomyelitis of the maxilla, Odontogenic infections and sinusitis, Sequestrectomy

References

1. Singh M, Singh S, Jain J, Singh KT. Chronic suppurative osteomyelitis of maxilla mimicking actinomycotic osteomyelitis: A rare case report. *Natl J Maxillofac Surg* 2010;2:153–6.
2. Osteomyelitis of maxilla: An unusual case. SriMallika Dasam, Tatapudi Ramesh, Moturi Kishore Ravikanth Manyam.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 502

Mucormycosis Affecting Midfacial Structures in Post COVID Immunocompromised Patients

Dr. Kavita Sharma

Bharti Vidhyapeeth Sangli

Abstract

Introduction

(COVID-19) caused by (SARS-CoV-2) was first identified in December 2019 Now there are increased cases with super infections by mucormycosis Mucor itself is only one genus of the three organisms potentially responsible for the disease in man. mucormycosis is most commonly reported in patients with diabetes mellitus, because the favorable carbohydrate-rich environment allows the Mucorales fungi to flourish, especially in the setting of ketoacidosis.

Mucormycosis is an opportunistic fungal infection that most often presents among patients with diabetes mellitus, immunodeficiency, neutropenia, iron overload, and severe burns. There has been a reported rise in mucormycosis among patients with post covid history.

Aims and Objective

Midfacial destruction in mucormycosis i.e., rhinocerebral mucormycosis is the most common form and is noted commonly in post covid uncontrolled diabetic patients.

Method

Herewith cases of post COVID-19 infection who received treatment, after getting discharged from covid hospital reported to our OPD with multiple intra oral sinus drainage, abscess, mobile tooth, edema and

pain in face. On clinical, radio imaging and on histopathological findings diagnosed as maxillary mucormycosis. CT scan revealing diffused thickening and clouding of maxillary mucosa. Biopsy suggestive of organism mucormycosis, systemic evaluation shows increased FBS and PPBS level. All the patient having mucormycosis underwent surgical removal of the affected part i.e. maxillectomy.

Results

The patient had an uncomplicated post op.

Conclusion

Mucormycosis is a fungal infection uncommon but potentially lethal, In COVID 19 pandemic patients having diabetes mellitus, post infection show risk of mucormycosis a fungal co-infection in our case.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 513

A Novel Technique for Resolution of Cavernous Venous Malformation of Buccal Mucosa

Dr. Sushree Sarita Swain

S.C.B Dental College and Hospital

Abstract

Venous malformations are the result of errors in vascular morphogenesis during the embryonic period. Persistence of embryonic vessels is typical for malformations, and the type of vessels that are present depend on the stage when arrest in the development occurred. In patients with congenital venous malformations, management is challenging because of thromboembolic complications or due to rupture. Adequate imaging in association with clinical findings is crucial to establishing the correct diagnosis. Traditional resection may result in haemorrhage, muscular, neural complications, and recurrence. For Venous Malformations, localized or diffuse, Sclerotherapy has become the widespread and most appropriate approach to treatment. Sclerosing agents like hypertonic saline, sodium morrhuate, sotradecol (STS), and polidocanol cause endothelial damage because of osmotic effect. Sclerosing agent is diluted with water soluble contrast to a 1.5% solution. Mixing it with air or CO₂ gas results in foam, which is more effective than solution. The use of foam Sclerosing agents has increased tremendously in all areas of Venous Malformations. This poster reports a case of Cavernous venous malformation in a 6 year old child, treated with Foam Sclerotherapy, subsequent follow-up has shown the therapy to be an effective modality in treating Cavernous venous malformations.

References

1. Gliviczki, P. et al. 2009. Vascular malformations: an update. Perspectives in vascular surgery and endovascular therapy, 21(2), pp. 133–148.
2. Górriz-Gómez, E. et al., 2014. Sclerotherapy of face and oral cavity low flow vascular malformations: our experience. British Journal of Oral and Maxillofacial Surgery, 52(1), pp. 43–47.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 590

COVID-19 Associated Rhino-Orbito-Cerebral Mucormycosis: Our Institutional Experience in Management

Dr. Hithyshi G. K.

Faculty of Dental Sciences, Ramaiah University of Applied Sciences

Abstract

Use of novel therapeutic protocols and immunosuppression in COVID-19 has led to resurgence of rare but fatal infection, Mucormycosis. It's an angioinvasive disease causing thrombosis due to fungi mucormycetes, commonly *Rhizopus Oryzae*. Germination of spores in COVID-19 patients occurs due to hypoxia, hyperglycemia, acidic medium, high iron level, immunosuppression, prolonged hospitalization and ventilator support. Forms of mucormycosis include Rhino-cerebral, pulmonary, gastrointestinal and disseminated. This poster illustrates institutional experience of 300 patients, the protocol for early diagnosis, minimizing predisposing risk factors, investigations, complex pharmacological, surgical management options and options for rehabilitation of rhino-orbito-maxillary form of covid-19 associated mucormycosis. Maxillectomy with debridement of necrosed bone, debridement of maxillary, sphenoid, ethmoid sinuses, retrobulbar injections of antifungals and in terminal stages exenteration of eye are surgical interventions which improve vascularity to the area, so that antifungals effectively reach the site. Postoperative rehabilitation options include ocular prosthesis, obturator, partial dentures, pterygoid and zygomatic implants. 1950 Smith and Krichner's criteria is considered as gold standard for nasal findings. As it's a multidisciplinary approach Physicians and dentists should be aware of the findings of this disease, to avoid diagnostic and therapeutic mishaps.

References

1. Woo SB, Greenberg MS. Ulcerative, vesiculous and bullous lesion. In: Greenberg MS, Glick M, Ship JA, editors. Burket's Oral Medicine. 11th Ed, India; B C Decker Inc Hamilton: 2008, pp. 74–5.
2. AjitAuluck. Maxillary necrosis by mucormycosis: A case report and literature review. Med Oral Patol Oral Cir Bucal. 2007;12:e360–4.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 591

Conundrum of Langerhans Cell Histiocytosis Management: Have We Achieved Enough?

Dr. Mahajan Arjun Deepak

Department of Oral and Maxillofacial Surgery, Faculty of Dental Sciences, Banaras Hindu University

Abstract

Langerhans cell histiocytosis, previously referred to as Histiocytosis X, is an extremely rare autoimmune disease with an incidence rate of 1–2 case per million in adult population. Heterogeneity in the management of Langerhans cell histiocytosis poses significant risk and increases morbidity due to delay in the treatment. The treatment modalities include surgery, radiotherapy, chemotherapy and long term steroid therapy. Paucity of the literature makes it difficult for the clinician to choose the acceptable treatment modality which directly correlates with the prognosis of the disease. The involvement of oral cavity per se is exceedingly sparse with incidence being less than 1% of all the diagnosed cases. Amongst various therapeutic modalities chemotherapy and radiotherapy present their own obvious pitfalls of limited application in pediatric patients, organ dysfunction and bone marrow suppression. The comparative studies between surgical debridement and ostectomy favours better prognosis with surgical debridement and promotes ostracizing ostectomy for severe cases with skeletal involvement. Herewith, the aim of this poster is to provide an answer to the conundrum regarding the management of Langerhans cell histiocytosis through the case report of a patient who reported to our unit and was successfully managed by surgical debridement.

Reference

1. Altay MA, Sindel A, Özalp Ö, Kocabalkan B, Özbudak EH, Erdem R et al. Langerhans Cell Histiocytosis: A Diagnostic Challenge in the Oral Cavity. *Case Rep Pathol.* 2017; 2017: 1691403.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 594

Large Maxillary Cyst: A Diagnostic Dilemma

Dr. Lakshay Gupta

Bapuji Dental College and Hospital, Davangere

Abstract

Huge cystic lesions in the anterior maxillary region usually possess a great difficulty in diagnosing and establishing treatment plan. Various factors such as size and location of the cyst, etiology, vitality of tooth, clinical features, signs and symptoms such as pain, paresthesia, drainage, tenderness, vision disturbances, cortical expansion, radiographic features along with cytopathology serve an accurate guide in establishing treatment plan. Factors such as the age of the patient, onset and duration of the cyst also helps in framing treatment. In this poster, we present a 21 year old female patient with an asymptomatic large maxillary cyst persisting chronically over a period of 7 months who presented to our department with drainage in the anterior maxillary teeth. The e-poster elaborates on the management of the large cystic lesion in the anterior maxillary region extending till the pyriform rim managed by curettage and complete extirpation-in-toto of the cyst, under inferior turbinate block and infra-orbital nerve block.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 634

Forewarned is Always Forearmed

Dr. Hamsini

Ragas Dental College and Hospital

Abstract

Introduction

The term aneurysmal bone cyst is misleading as it is not lined by epithelium, and it is not a true cyst. Aneurysmal bone cyst is a benign tumour like lesion with an expanding osteolytic nature, consisting of blood-filled spaces of variable sizes separated by connective tissue septae. The incidence of aneurysmal bone cyst in the maxillofacial region is rare and may remain undiagnosed for a long period prior to becoming symptomatic. These lesions are most commonly found in long bones and spine but 2% occur in jaws, more commonly in mandible than in the maxilla.

Case Report

A diagnosis of radicular cyst is usually entertained when maxillary cyst is associated with a non-vital tooth. We reported a rare case of aneurysmal bone cyst of maxilla associated with a non-vital tooth in a young female aged 15 years causing diagnostic dilemma.

Discussion

Everyone likes to see, hear, and know about rare things. Primary aneurysmal bone cysts of maxilla are rare. Association with radicular cyst is even rarer and can lead to diagnostic dilemma. The diagnosis of Aneurysmal bone cyst was only confirmed by a histopathological examination. Clinical examination, preoperative radiological investigation and incisional biopsy are nonspecific and inconclusive.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 646

Efficacy of Posaconazole Over Amphotericin B in Management of Serious Systemic Fungal Infections

Dr. Drishti Shah

YMT Dental College and Hospital

Abstract

Amphotericin B (AmB) is a crucial agent in the management of serious systemic fungal infections. In spite of its proven track record, its well-known side effects and toxicity will sometimes require discontinuation of therapy despite a life-threatening systemic fungal infection. AmB administration is limited by infusion-related toxicity, an effect postulated to result from proinflammatory cytokine production. The principal acute toxicity of AmB deoxycholate includes

nausea, vomiting, rigors, fever, hypertension or hypotension, and hypoxia. Its principal chronic adverse effect is nephrotoxicity. AmB probably produces renal injury by a variety of mechanisms. Clinical manifestations of AmB nephrotoxicity include renal insufficiency, hypokalemia, hypomagnesemia, metabolic acidemia, and polyuria due to nephrogenic diabetes insipidus. Whereas, Posaconazole is the newest antifungal agent to be approved for use in Canada. With excellent *in vitro* activity against a broad spectrum of yeasts and filamentous fungi, as well as having a well-tolerated oral formulation, posaconazole offers many potential advantages. of particular interest are its seemingly lower potential for cross-resistance with other azoles and its activity (unique among oral antifungal agents) against the zygomycetes. As the incidence of both common and uncommon fungal infections increases commensurate with the growing population of immunocompromised individuals, posaconazole may ultimately become an important therapeutic option. The present poster represents the efficacy of Posaconazole over Amphotericin B highlighting the advantages and disadvantages of both indicating posaconazole as an excellent choice over Amphotericin B.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 664

Odontomas: A Case Report Of 4 Different Cases

Dr. Priyanka Baruah

Shree Bankey Bihari Dental College

Abstract

The term “odontome” coined by Pierre Paul Broca in 1867. WHO classifies odontome as an odontogenic tumor composed of epithelium and odontogenic ectomesenchyme with or without formation of mineralized dental tissues. Odontomes may be classified into 2 types: complex and compound. 4 cases of odontome have been reported in the department of OMFS, Dr. R. Ahmed Dental College and Hospital.

1. A 38 yr/M reported with a chief complaint (c/o) of a painless swelling in his lower jaw on the right side.
2. A 28 yr/M reported with a c/o a swelling on his gums between his lower front teeth.
3. A 25 yr/F reported with c/o in her lower right back teeth region. (Accidental finding).
4. An 18 yr/F who reported with c/o in her lower right back teeth region.

Anterior maxilla—most common site for compound odontomas, complex odontomas—frequently occur in posterior mandibular. The case of compound odontoma that was discussed here had occurred in the anterior mandible. Most of the odontomes are asymptomatic. 4 cases discussed here, 2 cases exhibited painless swellings, while the other 2 exhibited pain. All cases discussed here were treated only by enucleation.

References

1. Reichart PA, Philipsen HP. Odontogenic Tumors and Allied Lesions. 3rd ed. London: Quintessence; 2004. p.141–53.

2. Hidalgo-Sánchez O, Leco-Berrocal MI, Martínez-González JM. Metaanalysis of the epidemiology and clinical manifestations of odontomas. *Med Oral Patol Oral Cir Bucal*. 2008; 13:730–4.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 673

Access Osteotomy

Dr. Anuradha Mandi

Dr. R Ahmed Dental College and Hospital, Kolkata

Abstract

The aim of the poster is to describe a case of large odontoma in the molar area of the mandible that was removed via access osteotomy through sagittal split of the mandible and to discuss the implications compared with other surgical approaches. Various techniques and combination of osteotomies facilitate access to the most inaccessible tumors of craniomaxillofacial region. Most appropriate surgical access is determined by considering the size, location, extension of the tumor. When the size and location of the odontoma endangers the inferior mandibular nerve or adjacent teeth and considering the age of the patient and benign nature of the tumour, a different approach is considered to avoid any complications. By the use of access osteotomy done through sagittal split osteotomy technique the access for the removal of large odontoma is gained. Since the size of the odontoma is large described in this case and by this approach we managed to avoid sacrificing a large amount of bone and damaging the inferior alveolar nerve.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 694

Uncommon Lesions In Infantile And Child Mandible: 2 Case Reports

Dr. Shanmugapriya M.

Rajah Muthiah Dental College and Hospital

Abstract

Presence of lesions in infant and child mandible are not very uncommon. The purpose of the present poster is to report relatively uncommon lesions in infant and child Jaws. Melanotic neuroectodermal tumours of infancy (MNTI) is rare, fast-growing, melanin containing lesions that commonly occur in the head and neck regions of children under the age of one. MNTIs are usually nonulcerative, painless, and pigmented lesions, but the pigmentation cannot always

be observed through the covering tissues. MNTI lesions are regarded as benign tumours, although they present as locally aggressive behaviour, including gradual invasion of the surrounding bone and sinuses. These lesions are characterized by high recurrence rate and the risk of malignant transformation. Myofibroma is a rare, benign spindle cell neoplasm that usually presents as a solitary mass or lesion. Myofibroblasts are spindle-shaped cells with the features of both fibroblasts and smooth muscle cells. It may occur over a wide age range, solitary tumours are more prevalent in children and adults, whereas multiple tumours may usually arise in newborns and infants. Males and females are affected equally. Solitary myofibroma shows a predilection for the head and neck, especially the soft tissues of the oral and maxillofacial region. When it appears in the oral cavity, it presents as a locally invasive, hard painless mass. Hard-tissue involvement in this region is less common while the majority of tumours affects the mandibular jaw bone as compared to maxilla.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 699

Collagen Membrane in Oral Submucous Fibrosis

Dr. B. Dinakar Reddy

Government Dental College, Raipur

Abstract

Oral submucous fibrosis is a chronic insidious disease and is well recognized as a premalignant condition. It is a collagen related disorder characterized by progressive hyalinization of submucosa. Conservative management of this disorder includes stoppage of habit, nutritional supplements and local and systemic glucocorticoids. Surgical management includes resection of fibrotic bands and reconstruction with partial thickness skin or mucosal grafts. But these procedures require a donor site and complications leading to flap and graft morbidity are associated. To avoid these, graft materials like collagen membranes were introduced. The purpose of this case study was to observe the efficacy of collagen membrane as a biodegradable dressing material in OSMF. Here, we are presenting a case of OSMF in a young healthy adult male patient, aged 18 years whose chief complaint was inability to open his mouth completely. He underwent surgery in which bilateral fibrous bands were resected and collagen membrane measuring 10 * 10 cm was used as dressing material. The nature of collagen membrane was found to be a very suitable alternate to other flaps used in OSMF as post-operatively there were no complications and collagen membrane also helped in post-operative haemostasis, pain control and rapid healing.

References

1. The efficacy of collagen membrane as a biodegradable wound dressing material for surgical defects of oral mucosa: a prospective study. <https://doi.org/10.1016/j.joms.2008.12.020>
2. Two wound-covering materials in the surgical treatment of oral submucous fibrosis: a clinical comparison. [https://doi.org/10.1016/S2212-4268\(12\)60004-9](https://doi.org/10.1016/S2212-4268(12)60004-9)

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 711

An Immunocompetent Pediatric Patient Presented With Feature of Rhino Orbital Mucormycosis: A Case Report

Dr. Sahnazul Hoque Talukdar

Al Ameen Dental College

Abstract

Background

Mucormycosis is a rare and frequently fatal opportunistic fungal disease. In adults, it usually affects immunocompromised diabetic patients, particularly in developing countries; most of the children with mucormycosis have an underlying hematological malignancy, but also uncontrolled diabetes type I has been reported. Mucormycosis exceptionally develops in immunocompetent adults and children. Acute invasive rhino-orbital mucormycosis usually affects diabetic or neutropenic patients, and only exceptionally develops in immunocompetent adults and children.

Methodology

A 2-years-old immunocompetent female, presented with complicated rhinosinusitis with a subperiosteal orbital abscess without improvement after initial medical and surgical management, the patient also represented a challenging and potentially lethal clinical scenario.

Results

Diagnosed with an unsuspected rhino-orbital mucormycosis by direct microscopy and PCR, she survived after amphotericin B, voriconazole and surgical treatment.

Conclusion

In cases with torpid clinical evolution, even in apparently immunocompetent patients, appropriate multidisciplinary workup must be performed to rule out opportunistic etiologies including mucormycosis to improve survival.

Keywords Mucormycosis, Amphotericin B, Immunocompetent

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 865

Early Management of Complex Odontoma of Mandible

Dr. Vikramjet

Post Graduate Institute of Dental Sciences, Rohtak

Abstract

Odontogenic tumors are a heterogeneous group of lesions of diverse clinical behavior and histopathologic types, ranging from hamartomatous lesions to malignancy. As Odontogenic tumors arise from the tissues which make our teeth, they are unique to the jaws, and by

extension almost unique to dentistry. One of which is Odontoma, associated with retention of deciduous teeth, non-eruption of permanent teeth, occasional pain, mild expansion of cortical bone and tooth displacement. But clinically they are often asymptomatic. If left untreated it causes impaction, malpositioning, aplasia, malformation, and devitalization of adjacent teeth. Diagnosis of odontoma at an early age and its surgical excision may prevent eruption disturbances. Odontomas are treated by conservative surgical extirpation, but special care should be taken for complex odontoma as it may relapse. In this poster we present a case of 17 years old male patient reported an asymptomatic hard growth in the left posterior region of mandible associated with impacted mandibular second molar. This E-poster elaborates on the management of complex odontoma in mandibular left posterior region by surgical excision of second molar along with odontoma followed by mini-plate fixation under General Anesthesia.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 875

Black Fungus-Diabetes Mellitus-Covid 19: A Complex Interplay

Dr. Vasireddi Neeraja

Ragas Dental College and Hospital

Abstract

Together with the ongoing serious COVID-19s wave in India, a serious fungal infection, mucormycosis has been increasingly found in COVID-19-recovered patients. Colloquially known as 'black fungus', mucormycosis commonly causes necrosis in the head and neck including the nose, paranasal sinuses, orbits, and facial bones, with possible intracranial spread. The common form of this infection is seen in the rhinomaxillary region and in patients with immunocompromised state such as diabetes. Hence, early diagnosis of this potentially life-threatening disease and prompt treatment is of prime importance in reducing the mortality rate. The use of high doses of corticosteroids in patients has led to a flare-up of secondary fungal infections, mucormycosis being an important one of them. With the blatant misuse of steroids, new cases of mucormycosis are coming into light every day, and as such it becomes important for a treating oral maxillofacial surgeon to familiarize themselves with the disease, aiding in early diagnosis. Delay in recognizing the early symptoms and signs could prove cataclysmic in a disease that already has such a high mortality rate. We present the case findings and treatment of COVID-19 associated mucormycosis patients who were treated at SDM Craniofacial Unit in the year 2021, and discuss the etiopathogenesis, management and associated risk factors to raise awareness for oral and maxillofacial colleagues.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 888

Surgical Management of Residual Hemangioma and their Scars in Head and Neck Region: Techniques and Results

Dr. Asha V. Shet

SDM College of Dental Sciences and Hospital

Abstract

Background

Propranolol became the 1st line treatment modality for problematic hemangioma with excellent outcomes. Still children with residual hemangioma or with complications like ulceration develop functional problem or severe scarring. The Study highlights different surgical modalities and their outcome in these children.

Methods

A prospective study conducted in the dept. of oral surgery and paediatric surgery from July 2016 to June 2020 after ethical approval. It included cases of residual hemangioma of head and neck region with cosmetic or functional problem managed by surgery with minimum 1 year of follow up. Visual analogue scales (VAS) were used to assess the severity of scarring perioperatively and patient satisfaction. Demographic data, outcome and complications were assessed.

Results

Total 82 children with 60 (%) F and 22 (%) M were included. Different flaps, multiple Z-plasty, local tissue advancement techniques, and primary closure were performed for scars of lip, cheek, nose and other regions successfully. Propranolol was most common pre operative regimen followed by intralesional bleomycin. The VAS score for scarring decreased significantly from 8.23–0.90 to 2.79–1.00 at 1 year follow up. The patient satisfaction VAS score improved from 3.45–0.86 to 9.87–0.34 at 1 year. 4 patients (4.8%) developed recurrence at mean follow up of 3.8–0.96 years.

Conclusion

Well-planned surgical management provides cosmetically excellent scar and patient satisfaction in cases with residual hemangioma. Pre-operative use of intralesional bleomycin therapy decreases the recurrence following excision.

Reference

1. Chang LC, Haggstrom AN, Drolet BA, et al.;. Growth characteristics of infantile hemangioma: implications for management. *Pediatrics*. 2008;122:360–367.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 912

Mucocele in Maxillary Sinus

Dr. Nishtha Chauhan

Department of Oral And Maxillofacial Surgery, Faculty of Dental Sciences, IMS-BHU

Abstract

Mucocele or the Mucous retention phenomenon, commonly considered to be of traumatic origin, is a lesion involving mucous secreting glands and their ducts. Mucocele of the paranasal sinus is an uncommon variant of the mucous retention phenomenon, frequently encountered as an incidental finding in a dental radiograph. It is an epithelial lined, mucus containing sac that can fill the sinus completely and is capable of expansion. They arise consequent to obstruction of the ostium and inflammation due to previous surgery or trauma of the paranasal sinuses or idiopathic in origin. The continuous mucus production and accumulation enlarges the mucocele gradually causing erosion and remodeling of the surrounding bone. Maxillary sinus mucocele is an uncommon benign lesion which develops due to retained secretions and presents as an expansile cystic lesion. The Symptoms are nonspecific and mostly due to pressure effects on the orbit or facial deformity. Endoscopic marsupialization of the mucocele is the surgery of choice, even though complicated cases maybe approached by an external route. We present a case of Mucocele in Left Maxillary Sinus, which was operated by an External Approach under General Anaesthesia.

References

1. Sathoo A, Tuli IP, Sharma N. Idiopathic mucocele of maxillary sinus: A rare and frequently misdiagnosed entity. *J Oral Maxillofac Radiol* 2016; 4:87–9.
2. Shafer, W. G., Hine, M. K., & Levy, B. M. (1983). A textbook of oral pathology. Philadelphia: Saunders, 7th Edition, p. 545.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 923

An Intangible Pathology Nestled in the Oral Cavity

Dr. Sanket Sachidanand Nayak, Prof. Dr. Pradeep Christopher Jesudas

Thai Moogambigai Dental College and Hospital

Abstract

Odontomas generally appear as small, solitary, or multiple radio-opaque lesions found on routine radiographic examinations. Traditionally, odontomas have been classified as benign odontogenic tumors and are subdivided into complex or compound odontomas-morphologically. Frequently, they are asymptomatic and interfere with the eruption of the teeth. These lesions are found incidentally during routine radiography. This poster portrays two cases of a compound odontomas. OPG and 3D CBCT spectacted multiple radio-opaque tooth like structures suggestive of compound odontome. Surgical removal of multiple odontomas along with the exposure or removal of associated teeth was done. Early diagnosis of odontomas and complete removal ensures better prognosis.

References

1. Rana V, Srivastava N, Kaushik N, Sharma V, Panthri P, Niranjana MM. Compound odontome: A case report. *International journal of clinical pediatric dentistry*. 2019 Jan;12(1):64.
2. De Oliveira BH, Campos V, Marçal S. Compound odontoma-diagnosis and treatment: three case reports. *Pediatric dentistry*. 2001 Mar 1;23(2):151–7.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 929

Management of Non-Syndromic Multiple Odontogenic Keratocyst: A Case Report With Literature Review

Dr. Pranchil Vinod Khathuria

Terna Dental College

Abstract

Introduction

Odontogenic keratocyst is an entity that comes under various headings of classification of odontogenic bone lesions proposed by WHO. Occurrence of multiple odontogenic keratocysts is rare but whenever encountered demands a higher vigilance in terms of presence of associated syndromes such as nevoid basal cell carcinoma syndrome.

Case

A 32 year female with the complaint of pain in lower right back region of jaw reported with history of presenting illness revealed that the pain was dull aching type that gets relieved on taking medications. There was a history of discharge 1 month back from the same region which got resolved on its own. Enucleation of all the cystic lining was performed with peripheral osteotomy followed by application of Carnoy's solution for 4 min in all the quadrants.

Discussion

The overall incidence rate of multiple odontogenic keratocyst (Syndromic and non syndromic) is found to be less as compared to solitary lesion. Many studies confirmed the association of multiple odontogenic keratocyst with syndromes such as nevoid basal cell carcinoma syndrome. The management of odontogenic keratocyst is a much debatable topic due its rate of recurrence as high as 62.5%.

Conclusion

An aggressive management is usually required to address the cases of odontogenic keratocyst which does not end after the surgery. The follow up of cases with multiple odontogenic keratocysts is even more demanding as the recurrence as well as development of any feature of Nevoid basal cell carcinoma syndrome has to be checked for.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 945****Odontogenic Keratocyst: Is 5-Fluorouracil the Solution?***Dr. Ishani Bhavne, Dr. Ramakrishna Shenoi**VSPM Dental College and Research Centre***Abstract**

Odontogenic keratocysts (OKC) is an aggressive cystic lesion of jaw arising from dental lamina with high growth and recurrence rates. The controversy for decades that its classification underwent many changes initially being classified as cyst, then as tumor and again reclassified as cyst indicates its aggressive potential. The treatment goal of developing a method that will minimize morbidity, maintain vitality of surrounding structures and reducing chances of recurrence have been challenged. Increased recurrence rates with Modified Carnoy's solution and cosmetic, functional deformities with resection calls for the need of understanding this lesion in a different perspective. The fact that OKC shares similarities with Basal Cell Carcinomas since both develop via Patched (PTCH) gene mutations can be utilized. With PTCH causing Smoothed (SMO) activation and Sonic Hedgehog (SHH) signals resulting in neoplastic changes, SHH signal pathway antagonism may be an effective way to target OKC with the aid of 5-Fluorouracil. Does the expression of various Immunohistochemistry markers from the OKC and linking them to predict response to 5-Fluorouracil be the solution for these unforfeiting lesions that's been haunting the surgeons?

Reference

1. Ledderhof NJ, Caminiti MF, Bradley G, Lam DK. Topical 5-fluorouracil is a novel targeted therapy for the keratocystic odontogenic tumor. *J Oral Maxillofac Surg.* 2017;75(3):514–24.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 952****Mucormycosis in Post-Covid-19 Patients: A Case Series***Dr. Sandeep B. S.**Bapuji Dental College***Abstract**

The current COVID-19 pandemic has thrown up yet an extra challenge for health care, with some cases of an uncommon fungal infection being described, which are associated with increased death rate. COVID-19 patients are predisposed to developing fungal infections as mucormycosis (MCR), which has been described from those still battling, and those who recently convalesced, especially

medically compromised patients. Opportunistic fungal infections such as MCR usually occur in immune compromised patients but can infect healthy individuals as well. Predisposing factors for MCR are uncontrolled diabetes, malignancies such as lymphomas and leukemia's, renal failure, organ transplant, long term corticosteroid and immunosuppressive therapy. In a recent systematic review, it was stated that 8% of patients suffered from fungal or bacterial co-infection through hospitalization. Oral manifestations of MCR in COVID-19 patients are usually seen in the palate and may include varying degrees of mucosal discoloration, swelling, ulcerations, superficial necrotic areas in the palate, bone exposure and necrosis with dark eschar formation. Early diagnosis of MCR is critical, as treatment should start as soon as possible in an attempt to decrease mortality. We would like to report 4 post-COVID-19 patients who had oral mucormycosis and got operated for same with 3 months follow-up.

References

1. Enji Ahmed et al. Oral mucormycosis in post-COVID-19 patients: A case series. *Oral Diseases.* 2021;07:1–2.
2. Auluck A. Maxillary necrosis by mucormycosis. A case report and literature review. *Med Oral Patol Oral Cir Bucal.* 2007;12:E360–4.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 960****Odontogenic Keratocyst (Orthokeratinised) in Ramus of Mandible: A Case Report***Dr. Rajat Kumar Jain**P.M.N.M Dental College and Hospital, Bagalkot***Abstract****Background**

Orthokeratinized odontogenic keratocyst differs from parakeratinized OKC in biological activity and histological aspects rather than clinical appearance. WRIGHT (1981) described it as a separate entity. Parakeratinized OKC is eight times more common than Orthokeratinized OKC.

Case Details

We present a case report of 40 years male patient who presented with pain and swelling over left mandibular angle region with pus discharge with fetid odor. Extra oral facial asymmetry was noted on left angle region. Intra-orally swelling was seen extending from retro molar region towards anterior border of ramus. On radiographic examination, a wide radiolucent area extending from third molar region to anterior ramus of the mandible up to sigmoid notch. A small specimen was collected and sent for biopsy which reveals it as an orthokeratinized variant of OKC.

Conclusion

Surgical enucleation of the lesion was done along with removal of infected tooth. Microscopic examination of specimen revealed orthokeratinized OKC. Orthokeratinized OKC variant should be considered in differential diagnosis of radiolucent lesions involving impacted tooth. Though the lesion involved extensively, the patient

was managed conservatively, and follow-up shown remarkable bone formation without any recurrence.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 972

Odontogenic Myxoma: A Case Report

Dr. B. K. Manohar

MANU

Abstract

Myxoma, also known as odontogenic myxoma and myxofibroma is described by WHO as a locally invasive neoplasm consisting of rounded and angular cells that lie in an abundant mucoid stroma. It is locally aggressive and infiltrating in nature. It has been reported to occur mainly in the jaws, mostly as central lesion and that too in the mandible. The tumour may be first noticed as swelling or asymmetry of the affected jaw, rarely associated with pain or ulceration which may manifest when it interferes with occlusion. A 32-year-old female patient reported to our centre with large asymptomatic swelling in the right side of midface with no dental complaints who was treated with complete surgical excision of tumour using the time tested Weber Ferguson approach followed by biopsy of the lesion suggestive of rare odontogenic myxoma of the maxilla. The reconstruction of the defect was done using allogeneous bone graft graft.

References

1. Boffano, Paolo MD*; Galesio, Cesare MD, DDS*; Barreca, Antonella MD†; Bianchi, Francesca Antonella MD*; Garzino-Demo, Paolo MD*; Rocca, Fabio MD* Surgical Treatment of Odontogenic Myxoma, Journal of Craniofacial Surgery: May 2011, Volume 22, Issue 3, p 982–987. <https://doi.org/10.1097/SCS.0b013e3182101400>
2. Gupta S, Grover N, Kadam A, Gupta S, Sah K, Sunitha JD. Odontogenic myxoma. Natl J Maxillofac Surg 2013;4:81–3.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 977

An Unusual Presentation of Oral Hemangioma in an Asian Adult Male

Dr. Viplove Ukey

Rungta College of Dental Sciences and Research

Abstract

Introduction

Presentation of an oral hemangioma in adulthood is rare. As the prevalence of oral hemangioma is in infants and white with three times more incidence in females. The objective of this case report is to highlight this unusual appearance of Oral Hemangioma at uncommon location.

Case Presentation

A 25 years old male presented with a soft, sessile, growth in oral cavity which was since 2 months and had spontaneous bleeding on brushing teeth. Patient had reported no relevant medical of family history or no history of tobacco or alcohol consumption.

Diagnosis

Based on the available biopsy reports and clinical demonstration, a diagnosis of pyogenic hemangioma was made. Following physical examinations and digital subtraction angiography (DSA), which showed the growth to be vascularized and have feeder vessels from different branches of external carotid artery, it was confirmed that the lesion was a hemangioma.

Discussion

Various treatment modalities like embolization, ECA ligation, medical and surgical managements are available which are discussed in the case report.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 990

Contingencies: The Incidental Findings

Dr. Murtuza Mohemadali Contractor

Dr. D. Y. Patil Dental College and Hospital

Abstract

Radiolucency and radiopacities of maxilla and mandible could be of normal clinical presentation. What if they are found to be more in excess. Then arises the question of any other pathology. One or more radiolucencies or radiopacities cannot show normal clinical signs and symptoms unless triggered by external mechanisms. Certain multiple radiopacities and radiolucencies are incidental findings when investigating the patient for any other insignificant complaints. The radiopacities and radiolucencies are not only to be focussed on local pathological aspects, the underlying medical conditions and associated syndromes should also be ruled out. When these radiopacities and radiolucencies are seen as incidental findings of maxilla and mandible, don't be in a hustle in planning a surgical treatment. Although medical condition assessment is mandatory in these cases but when they are associated with a syndrome a special attention is needed in identifying and treating multiple problems associated with it like Gorlin-Goltz syndrome, Maroteaux-Lamy syndrome, Grinspan syndromes etc. Gorlin-Goltz syndrome is one of the rarest syndrome over south indian population. Here we report one such patient with multiple radiolucencies of maxilla and mandible with other clinical features suggestive of Gorlin-Goltz syndrome.

References

1. Gorlin-Goltz syndrome-Deepti Singh Jawa, Keya Sircar, I Rani Somani, Neeraj Grover, I Shipra Jaidka, and Sanjeet Singh. J Oral

Maxillofac Pathol. 2009 Jul-Dec; 13(2): 89–92.
<https://doi.org/10.4103/0973-029X.57677>

2. Multiple jaw cysts-unveiling the Gorlin-Goltz syndrome. S Manjima 1, Zameera Naik 1, Vaishali Keluskar 1, Anjana Bagewadi 1 Contemp Clin Dent 2015 Mar;6(Suppl 1):S102–5.
<https://doi.org/10.4103/0976-237X.152959>

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 999

Versatility of the Midface Degloving Approach for Extended Exposure in Maxillofacial Surgery

Dr. Acchuthakrishnan K. A.

Karpaga Vinayaga Institute of Dental Sciences

Abstract

Introduction

A generous exposure of the midface region is essential for a comprehensive and thorough execution of midface surgical procedures, especially bilateral procedures. Traditional approaches to the midface, like the lateral Rhinotomy and Weber–Fergusson/Dieffenbach incision with their modifications leave a visible scar, and they are limited in their unilateral exposure. The midface degloving approach with its exclusive intranasal and intraoral incisions leaves no external scars and lends excellent bilateral exposure of the maxilla, zygoma, paranasal areas and infraorbital margins from one side to the other. The midface degloving approach is mainly used to expose pathologies of the maxilla, nasal cavities, paranasal sinuses, nasopharynx, and the central compartment of the anterior and middle cranial base. This approach can also be used to treat midface trauma and perform high-level osteotomies.

Materials and Methods

We describe the midface degloving procedure for 11 cases operated in the Department of Oral and Maxillofacial Surgery over a period of 7 years (2013–2019): seven maxillary tumors, two maxillary cysts, one Kufner’s maxillary osteotomy, and one pan facial trauma.

Results

We obtained excellent exposure for all the cases using this approach. Complications included mild distortion of the lower lateral nasal cartilages and oro-nasal communication.

Conclusion

The midface degloving approach lends excellent surgical access to the midfacial skeleton including maxilla, paranasal areas, maxillary sinus, the zygoma, and infraorbital rims. The advantage of this approach besides its generous exposure, is the excellent cosmesis it provides, leaving no external scars.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1025

Computed Tomography (CT) Scan-Based Step By Step Diagnostic Algorithm to Identify Maxillofacial Pathologies

Dr. Mohamed Ali

Meenakshi Ammal Dental College and Hospital, Chennai, 600095.

Abstract

Introduction

Oral and maxillofacial pathologies comprise of wide spectrum lesions affecting the oral cavity, head and neck. Along with clinical examination, radiological imaging is essential for making correct diagnosis. Various imaging modalities such as Intraoral periapical radiographs (IOPA), Orthopantomogram (OPG), Computed tomography (CT) scan, Cone beam computed tomography (CBCT), Magnetic resonance imaging (MRI) are used to assess pathologies. CT scans have become the most widely used imaging modality, it is useful for diagnosing and determining the extent of these pathologies. Interpreting CT scans of head, neck is challenging because of the various structures present in the small area. Often the confirm diagnosis and surgical treatment plan is dependent on the radiologist’s reporting. It should be a basic skill for oral and maxillofacial surgery residents to be able to read CT scans and to co relate it clinically.

Aims

To design a step-by-step algorithm to interpret CT scans and identify different maxillofacial pathologies.

Method

200 Computed tomography (CT) scans of various maxillofacial pathologies were evaluated. All gross features were noted along with subtle characteristic features which help delineate the various pathologies grouped as inflammatory, benign and malignant tumors, cysts and an algorithm was formulated.

Results

The algorithm shall be displayed in the electronic poster.

Conclusion

The purpose is to provide a step-by-step method to dissect CT scans to establish correct diagnosis and chalk out treatment plan for various maxillofacial pathologies.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1047

Is Histopathological Diagnosis the Only Touchstone Determining the Surgical Management of Odontogenic Lesions: A Case Report

Dr. Ria Mukharjee, Dr. Sanskriti Gandhi

MGM Dental College and Hospital

Abstract

Adenomatoid odontogenic tumor (AOT) is slowly growing benign tumor involving anterior maxilla commonly. Although being noninvasive, chances of AOT being aggressive do exist owing to its clinico-histopathologic variants. Its similarities with histogenesis of ameloblastoma makes histopathological diagnosis secondary criteria for determining treatment plan. Clinical picture of lesion, extensiveness, healthy functioning of adjacent structures and esthetic outcome should be considered as primary criteria as AOT is bound to occur in younger age group.

Case Report

A 17 year old female patient visited department of Oral and Maxillofacial Surgery with chief complaint of swelling in right cheek region since 2 months. CT scan showed it to be massive in size—45 * 35 mm involving maxillary alveolar process irt. 17, 16, 55, 54, 53, 12, 11 with impacted 15, 14, 13 extending to maxillary sinus. Pretreatment misdeem occurred by diagnosing it as ameloblastoma via incisional biopsy. Contradictorily, postoperative excisional biopsy confirmed it as AOT.

Aim

To opt for conservative approach instead of radical one by primarily considering clinical scenario.

Method

Cystic enucleation and chemical cauterization with retrograde MTA filling i. r.t 16.

Results

Opting conservative approach proved to be superior and beneficial in terms of esthetics, functions and healing. A 6 months follow up is recorded.

Conclusion

Keeping only histopathologic findings as base for treatment planning might result in unnecessary mutilating surgery. Due consideration of clinical features, patient's aspects and surgeon's own experience should be done beforehand.

Reference

1. Aggressive adenomatoid odontogenic tumor: an uncommon case report and discussion on differential diagnosis. Cunha et al. J. Oral Diag 3(1): 1–6; 2018.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology**

Reg. Num.: 1051

Decompression of Odontogenic Cyst by an Innovative Technique: Speech Pro Mycostatic Prosthesis

Dr. Yashesh Patel

AMC Dental College, Ahmedabad

Abstract**Background**

Speech Pro Mycostatic Prosthesis is the common way to restore speech after Laryngectomy. It has a one way valve mechanism and hence we used this prosthesis in the decompression of Odontogenic cyst. Here we present a case report on a 50 year old male with

odontogenic cyst who has undergone decompression using this prosthesis.

Aim and Objectives

To evaluate the efficacy of Speech pro: mycostatic prosthesis in the decompression of odontogenic cysts at different sites in the oral cavity.

Method

Case Report: A 50 year old, Male patient, reported with a chief complaint of swelling in left lower back teeth region for past 20 days. Clinical and radiological findings suggest the possibility of cystic lesion in left mandible. During incisional biopsy, Speech pro Mycostatic prosthesis was placed and sutured in the cystic region.

Results

The soft silicone prostheses tightly adapt to the outer mucosa as well as the inner cyst cavity because of their broad soft flanges. Advantages includes no mucosal irritation, improved retention. Hence we used Speech pro mycostatic prosthesis for decompression which is economically feasible and commercially available and to evaluate the volume changes in the cyst using CBCT.

Conclusions

Overall, there have been fewer problems and better patient tolerance. This technique could benefit from a more thorough evaluation of both efficacy and patient satisfaction.

References

1. Self-retained Voice Prosthesis In The Decompression of The Odontogenic Keratocyst: A Technical Note, J Oral Maxillofac Surg, 2020.
2. Tracheo Oesophageal Puncture Voice: An Indian Perspective, Indian J Otolaryngol Head Neck Surg, 2010.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology**

Reg. Num.: 1065

A Rare Case of Osteomyelitis of Maxilla Secondary to Osteopetrosis in Brothers

Dr. E. Lakshmi Priya

CSI College of Dental Sciences and Research

Abstract**Introduction**

The osteopetrosis are a heterogeneous group of sclerosing bone dysplasias. Autosomal dominant osteopetrosis has been reported with a prevalence estimated up to 5.5:100,000.

Case Description

A 23 years old male patient reported to the Department of Dentistry, AIIMS Raipur with a chief complaint of swelling in the left cheek for the past 1 year, with a history of self-exfoliation of tooth followed by swelling in the upper jaw and no history of pain/bleeding/pus discharge from jaws. Past medical history revealed splenectomy in 2018 and fracture—Twice, 10 years back in—Radius-ulnar region and 7 years back in—Femoral neck for which surgical management wasn't done led to irregularity in leg length. Family history revealed 27 years old elder brother too suffering from the same complaint and had a history of fracture and irregularity in leg length and unaffected

younger sister. Clinically presented with strabismus, blurring of left eye vision, maxillary and mandibular micrognathia, and swelling in right canine fossa region measuring 3 cm * 3 cm—noncompressible, non-pulsatile, diffuse; Intra-oral examination revealed exposed bone with blackish discoloration in 23–27 region and 42–45 region and multiple missing and retained deciduous teeth. His brother had a similar presentation, of maxilla from the 22–28 region. Clinical Diagnosis of osteomyelitis secondary to systemic condition was arrived at. Surgical management: Surgical Debridement was done.

Discussion

A thorough knowledge of pathologies must be there in clinicians minds when uncommon clinical presentations like osteomyelitis of maxilla are encountered.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1068

Management of Triple Threat of the Pandemic

Dr. P. Preetha Anand, Dr. Manish Jagdish Raghani

AIIMS Raipur

Abstract

Mucormycosis is a deadly invasive fungal infection caused by the Rhizopus species of Class Zygomycetes of Subphylum Mucormycotina and Order Mucorales, where the hallmark of the disease progression includes angioinvasion and tissue necrosis that aid in fungal dissemination through the bloodstream causing fungal infection and hence resulting in poor penetration of anti-fungal agents to the site of infection. Mucorales are the opportunistic pathogens requiring suppressed immune system or any underlying condition to cause the disease. Triple threat of COVID-19 pandemic was observed in these patients where a triad of COVID-19 infection with Mucormycosis along with immunocompromised conditions like Diabetes mellitus (ketoacidosis), iatrogenic immunosuppression, use of corticosteroids or desferoxamine, prolonged use of contaminated humidifiers and disrupted muco-cutaneous barriers caused by catheters and other devices was seen. This poster explains 10 cases of Mucormycosis (with comorbidities) operated by team of Dr Neelakamal Hallur and Dr Pallavi, consultant OMFS at Suchirayu Hospital, along with varied clinical manifestations involving the nose, various sinuses, palate, orbit and the cranial structures, investigations and the different surgical treatment modalities undertaken for the management of the deadly disease, which include FESS (Functional Endoscopic Sinus Surgery), Partial or Total Maxillectomy, Craniotomy along with orbital exenteration for Rhino-orbito-cerebral mucormycosis and prosthetic rehabilitation by palatal obturators.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1074

Unicystic Ameloblastoma

Dr. Amruta S. Kulkarni

Albadar Rural Dental College Gulbarga

Abstract

Ameloblastoma is the most common benign, odontogenic tumour of epithelial origin. The WHO defines ameloblastoma as a benign but locally invasive polymorphic neoplasm consisting of proliferating odontogenic epithelium, usually having a follicular or plexiform pattern, lying in a fibrous stroma. It presents as an asymptomatic slow growing lesion which predominantly occurs in the mandible. There is no sex predilection with a peak incidence in the third to fourth decade of life. Ameloblastoma presents as three variants, namely the conventional (solid)/multicystic ameloblastoma, unicystic ameloblastoma and the peripheral (extra osseous) ameloblastoma. Among the three variants, the conventional type is the most common variety and Unicystic Ameloblastoma is a comparatively rare type. Unicystic ameloblastoma differs considerably from the conventional type by presenting at a relatively younger age group, being typically unilocular on radiographs, appearing cystic macroscopically and also by responding better to conservative treatment modalities. Though several treatments ranging from enucleation to resection are employed for the treatment of unicystic ameloblastoma, a more conservative treatment is preferred for the pediatric population. Here we present a case of mural variant of Unicystic Ameloblastoma in a pediatric patient 9 years old was treated conservatively with enucleation followed by application of Carnoy's solution to the cystic cavity. The aim of this case report is to emphasize conservative management in the treatment of Unicystic Ameloblastoma in pediatric patients considering growth and development in children.

References

1. Chaudhary Z, Sangwan V, Pal US, Sharma, P. Unicystic ameloblastoma: A diagnostic dilemma. *Natl J Maxillofac Surg* 2011; 2:89–9.
2. Gupta N, Saxena S, Rathod VC, Aggarwal P. Unicystic ameloblastoma of the mandible. *J Oral Maxillofac Pathol* 2011; 15:228–31.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1075

Hybrid Ameloblastoma Arising from a Treated Odontogenic Keratocyst of the Mandible: A Rare Case Report

Dr. Tanmay Mandal, Dr. Srivatsa Kenga Subbiah

Thai Moogambigai Dental College and Hospital

Abstract

Odontogenic keratocyst (OKC) is an odontogenic cyst of developmental origin arising from remnants of the dental lamina. Malignant or benign transformations though rare have been noticed from their epithelium. Ameloblastomatous transformation from an OKC is extremely rare with such lesions being referred to as combined/hybrid odontogenic lesions. Hybrid odontogenic lesions are a rare occurrence in maxillofacial pathology with only 8 cases being reported in the medical literature. This is an intriguing case of a 60-year-old male who was operated on for OKC of the anterior mandible 3 years before, who reported back with a complaint of swelling over the same site. Incisional biopsy revealed the acanthomatous type of ameloblastoma for which segmental resection with immediate reconstruction using recon plate was done. Excision biopsy revealed a plexiform variant along with acanthomatous type, thus exhibiting a hybrid pattern. Maxillofacial surgeons and pathologists should be aware of this distinct entity during the histopathological examination and to watch out for any such epithelial metaplasia occurring in OKC's and islands of epithelial transformation within ameloblastoma signifying varying genetic behavior patterns within the field of foci exhibiting as hybrid lesions. Surgeons should be cautious of this hybrid presentation as the clinicopathogenesis of such lesions is yet to be explored in terms of genetic behavior pattern and presentation, the growth rate and recurrence profile of this tumor often leave the surgeon in a dilemma to plan the resection and reconstruction aspect and strict monitoring of the follow-up and patient compliance regarding this is very much mandatory. To date, no set guidelines exist to predict the behavior and recurrence of this lesion.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1079

Sub-mental Epidermoid Cyst

Dr. Manoj Kumar V.

Indira Gandhi Institute of Dental Sciences, Sri Balaji Vidyapeeth University, Pillayarkuppam, Pondicherry, 607402

Abstract

Epidermoid and dermoid cysts are nonodontogenic inclusion cysts lined by ectoderm. Epidermoid cysts may be categorized as congenital or acquired based on their origin, although there is no disparity between the two clinically or histologically. Only 7% of epidermoid cysts seen across the body occur in the head and neck, with only 1.6% occurring in the oral cavity. This unpleasant, slow-growing intraoral entity is commonly seen in the submandibular, sublingual, and submental regions. They can cause dysphagia and dyspnoea and have the potential to becoming cancerous. Series of cases reported to our department of oral maxillofacial surgery, Mithila minority dental college and hospital. Diagnosis was confirmed by clinical, radiological and histopathological examination. Surgical excision is the preferred method of treatment. Our patients were treated by different intraoral approaches. No recurrence was seen during 2 years of follow up.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1168

Covid 19 Oral Manifestations: A Rainbow of Lesions

Dr. Amit Kumar Singh

Mithila Minority Dental College and Hospital

Abstract

Background

COVID-19 is continuing to tax humanity in more ways than one. In patients with COVID infection presently or for those in post-COVID recovery phase, a myriad of complications have sprung up including cardiac damage, acute renal failure, GI complications, anosmia, and oral mucosal lesions. This review poster stages the oral complications presented by patients during and after COVID-19 infection. Some such complications include dysgeusia, secondary bacterial and fungal infections, ulcers, erosions, bullae, fissured tongue, *Mucor mycosis*, etc.

Aim

In this review poster we described oral lesions of COVID-19 patients.

Material and Methods

Computerized search in PubMed, google scholar and Cochrane (2020–2021) using specific words such as COVID 19, post COVID 19 infection, lesions in oral and maxillofacial region were used with abstracts written in English.

Conclusion

Lack of oral hygiene, opportunistic infections, stress, immunosuppression, vasculitis and hyper-inflammatory response secondary to COVID-19 are the most important predisposing factors for onset of oral lesions in COVID-19 patients. These conditions need to be managed by a team of doctors in an interdisciplinary approach.

Reference

1. Amorim dos Santos, J., Normando, A. G. C., Carvalho da Silva, R. L., De Paula, R. M., Cembranel, A. C., Santos-Silva, A. R., & Guerra, E. N. S. (2020). Oral mucosal lesions in a COVID-19 patient: New signs or secondary manifestations? *International Journal of Infectious Diseases*, 97, 326–328. <https://doi.org/10.1016/j.ijid.2020.06.012>

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1194

Radicular Cyst of Maxillary Sinus with Oroantral Fistula Closed with Autogenous Bone Graft and Palatal Mucosal Flap: A Case Report

Dr. Poorna P.

Manipal College of Dental Sciences, Mangalore

Abstract

Radicular cysts are inflammatory odontogenic cysts of tooth bearing areas of the jaws. They account for more than 50% of all odontogenic cysts. They appear as well-defined radiolucent lesions involving the apex of offending tooth. Owing to its clinical characteristics similar to other commonly occurring lesions in the oral cavity, differential diagnosis should include dentigerous cyst, ameloblastoma, adenomatoid odontogenic tumour and odontogenic keratocyst. It is easier for lesion to extend through the cancellous bone of maxilla into surrounding anatomical structures such as the maxillary sinus. The present case report is a large radicular cyst involving the maxillary sinus with oroantral fistula. Based on clinical, radiographical and histopathological findings, the case was diagnosed as an infected radicular cyst of maxillary sinus. The lesion was surgically enucleated along with closure of oroantral fistula with autogenous symphysis bone graft and palatal mucosal flap. There was no postoperative complications and satisfactory healing was achieved.

References

1. Calin, Dorelia. (2014). Closure of fistula oroantral caused by a maxillary extended radicular cyst using a palatal connective tissue graft: a case report. Romanian Journal of Functional and Clinical, Macro- and Microscopical Anatomy and of Anthropology. 13. 527–34.
2. Velasco, I.; Vahdani, S.; Nuñez, N. & Ramos, H. Large recurrent radicular cyst in maxillary sinus: A case report. Int. J. Odontostomat., 11(1):101–105, 2017

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1205

Schwannoma of Infratemporal Region: A Rare Entity

Dr. Sri Sahana I.

Rajas Dental College and Hospital

Abstract

Schwannomas are benign, encapsulated peripheral nerve tumors arising from the Schwann cell. It was first reported by Verocay in 1910. Schwannomas can occur at any age but are very common in the between 30 and 50 years of age. Approximately 37–45% of schwannomas occur in the head and neck region, and the lesions commonly arise from the roots of cervical and cranial nerves in the parapharyngeal space, with the majority originating from the Vagus nerve. In the oral cavity schwannomas are most commonly seen in the tongue and floor of the mouth. They rarely occur in maxilla or mandible with a unilocular expansile radiolucency. Schwannoma in the infratemporal region is very rare and mostly arises from the trigeminal nerve. This case report highlights a case of schwannoma of a 44-year old female who reported with a progressive swelling over the face for 2 years and pain during chewing for 6 months which was in the infratemporal region radiologically. A pericapsular excision was done and the tumor was resected successfully using Weber Ferguson approach.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1209

Cysticercosis of the Maxillofacial Region: A Rare Parasitic Cyst

Dr. Y V B S Sai Sarat

St Joseph Dental College

Abstract

Cysticercosis is a potentially fatal parasitic disease that rarely involves the oral region in humans. Cysticercosis is the result of infection with the larval stage of the tapeworm, *Taenia solium* (*T. solium*) Cysticercus, the larval stage of *T. solium*, resides in muscle and other tissues in pigs that serve as an intermediate host. Ingestion of inadequately cooked pork containing cysticerci leads to infection in human beings, the definitive host. Human beings can also serve as intermediate hosts through accidental ingestion of *T. solium* eggs. Acquisition of cysticercosis is therefore mainly by the fecal–oral route and not necessarily by eating pork. The larvae penetrate the mucosa, enter blood vessels and lymphatics and are distributed all over the body but preferentially locate to brain, muscle, skin, liver, lungs, and heart. Oral cavity involvement of cysticercosis is rare but frequently reported from developing countries. They are also found in the oral and perioral tissues, especially muscles of mastication. This poster highlights two cases of cysticercosis of the maxillofacial region which were successfully treated.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1211

Behaviour of the Cyst

Dr. Golla Gowtham

St. Joseph Dental College

Abstract

Introduction

A cyst is a pathologic cavity that may or may not be lined by epithelium, surrounded by fibrous connective tissue and contains serous fluid, mucinous substance, purulent exudate, blood etc. Most of the cyst arise from epithelial remnants related to some embryologic development and are therefore referred to as developmental cysts. Early recognition and referral to oral and maxillofacial surgery minimizes the extent of jaw bone destruction. The most frequently occurring odontogenic cysts are periapical cysts, dentigerous cysts, residual cysts, and odontogenic keratocysts. Histopathologic examination remains the gold standard investigation for diagnosis of the cysts. In this review of “The Behaviour of the cyst”, process of cyst formation and its growth will be discussed. Pseudocyst will not be

included in discussion, as it lacks epithelial lining, which plays an important role in cyst behaviour.

Discussion

The common behaviour of the cysts is the stimulation of residual developmental epithelial cells leading to proliferation but not invasion of adjacent tissues. The rest cells proliferate into a solid mass of epithelial cells and as it enlarges, the cells in the center becomes necrosed due to deficient blood supply and they form lumen and further knowledge in knowing the steps in formation of the fluid inside the cyst will disclose the difficulties in histopathological and clinical diagnosis of the cyst. Hence understanding the concept of how the cyst behave? is mandatory in the effective treatment planning of the cyst.

References

1. Rajendra Santosh, A. B. (2019). Odontogenic Cysts. Dental Clinics of North America. <https://doi.org/10.1016/j.cden.2019.08.002>
2. Oral and Maxillofacial Pathology, A Rationale for Diagnosis and Treatment by Robert E. Marx, Diane Stern.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1217

Bisphosphonates Related Osteonecrosis of Jaw in Children and Its Management

Dr. Harish Kumar N.

A.B. Shetty Memorial Institute of Dental Sciences

Abstract

Bisphosphonates are chemical analogues of naturally occurring pyrophosphates that inhibit bone resorption and have a cumulative inhibitory effect on pathological bone loss. Their use has become a widely accepted treatment in children and adolescents for various bone disorders, including osteogenesis imperfecta (OI). The risk of osteonecrosis is age dependent, with adolescents being more prone to develop osteonecrosis than both young children and adults. Osteonecrosis appears to have a multifactorial origin. Bisphosphonates are proven to be well tolerated and safe in the doses used in children in short term, however, little is currently known of the long-term consequences in these patients. Therefore, for all children treated with these agents are to be routinely monitored for unexpected late complications. No cases of BRONJ have been reported in children and adolescents despite the use of variable doses of intravenous bisphosphonates. The aim of the current poster is to evaluate the pediatric patients treated with intravenous bisphosphonates for occurrence of osteonecrosis of jaw and its various treatment modalities.

References

1. Brown JJ, Ramalingam L, Zacharin MR. Bisphosphonate-associated osteonecrosis of the jaw: does it occur in children? Clin Endocrinol (Oxf). 2008 Jun;68(6):863–7. <https://doi.org/10.1111/j.1365-2265.2008.03189.x> Epub 2008 Jan 21. PMID: 18221397.

2. Bhatt RN, Hibbert SA, Munns CF. The use of bisphosphonates in children: review of the literature and guidelines for dental management. Aust Dent J. 2014 Mar;59(1):9–19. <https://doi.org/10.1111/adj.12140> Epub 2014 Feb 4. PMID: 24495226.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1222

Submandi

Dr. R Humsini

Bapuji Dental College And Hospital, Davangere, Karnataka

Abstract

Introduction

Sialolithiasis is the formation of calcific concretions within the parenchyma or ductal system of the major or minor salivary glands, but it most commonly affects the submandibular salivary gland. Sialolithiasis usually occurs in adults aged 30–60 years and causes pathognomonic pain during meals. The treatment of sialolithiasis depends on the size and location of the calculi.

Methods

Surgical excision of the calculi has been done in the presented case under local anesthesia under pre and post-operative antibiotic coverage to avoid any secondary infections.

Conclusion

Sialolithiasis is a common salivary gland disorder, especially for the submandibular gland. Preoperative history and clinical and radiographic examinations are crucial for establishing the clinical diagnosis and treatment protocol.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1229

Fibro-Osseous Lesions: Diagnostic Challenges and Treatment Modalities

Dr. Abhishek Biswas

Awadh Dental College and Hospital

Abstract

Fibro osseous lesions (FOLs) are a generic nomination of a poorly defined group of lesions that are known to affect the jaws and the craniofacial bones which are recognized for their confusing area in diagnostic pathology The microscopic features generally consist of a benign connective tissue matrix and islands/trabeculae of new bone.

A definitive and early diagnosis should be actively sought so that lesions are treated correctly. Early definitive treatment of fibro-ossseous lesions decreases recurrence and morbidity. This poster will emphasize on the workflow process in the management of fibro-ossseous lesions.

References

1. Koury ME, Regezi JA, Perrott DH, Kaban LB. “Atypical” fibro-ossseous lesions: diagnostic challenges and treatment concepts. *International Journal of oral and maxillofacial surgery*. 1995 Apr 1;24(2):162–9.
2. MacDonald DS. Maxillofacial fibro-ossseous lesions. *Clinical radiology*. 2015 Jan 1;70(1):25–36.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1259

Masked Space Infection of Head and Neck: A Real Challenge

Dr. Nikita Singhal

AB Shetty Memorial Institute of Dental Science

Abstract

Introduction

Knowledge of the management of infections of the deep spaces of the neck is essential to the daily practice of oral and maxillofacial surgery. Timely decisions must be made through the acute course of the disease. Interventions must be performed with the appropriate surgical skill. The surgeon must decide on medical and surgical management, including antibiotic selection, how to employ supportive resuscitative care, when to operate, what procedures to perform, and how to secure the airway. To make these decisions the surgeon must understand the anatomy of the region and the etiology of infection, appropriate diagnostic workup, and medical and surgical management.

Aim

Assessment and management of the challenging space infection.

Method and Methodology

This case series is conducted by obtaining data from 2018 to 2021 by reviewing clinical case record sheets and imaging records. An extensive literature search was done in pubmed, google scholar and scopus to cross check the available cases for space infection of head and neck region.

Results

On retrospective examination, we found 4 patient of facial space infection for which clinical and radiological assessment was done followed by surgical management was carried out.

Discussion

All the patient underwent radiological examination. Preoperative assessment and treatment plan was done. Surgical intervention was carried out and definitive antibiotic management of patient was done.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1262

A New Beacon of Light in Management of Infantile Hemangiomas

Dr. Devanshu Sinha

SRM Kattankulathur Dental College and Hospital

Abstract

Hemangiomas are common tumors containing a significant proliferation of blood vessels, chiefly blood capillaries. Congenital hemangiomas can often grow in size over time. Because of their unpredictable behavior and high recurrence rate, hemangiomas have long been a problem for clinicians to manage. A variety of treatment modalities have been tried over the years, including excision, electrocoagulation, cryotherapy, intravascular magnesium or copper needles, corticosteroids, interferon- α , embolization, LASER and sclerotherapy. Surgical line of treatment being debulking and recontouring of the affected areas, total or subtotal excision alone can lead to the risk of uncontrolled bleeding. Medical management includes systemic propranolol while small infantile hemangiomas may be given topical timolol. Percutaneous sclerotherapy using fibrin glue, OK-432 and pingamycin are simple, safe and effective method. A combination of surgical line of treatment being debulking and recontouring of the affected areas, embolization with total or subtotal excision, and usage of latest developments like Sirolimus, cater to risk of uncontrolled bleeding. Photobiomodulation combined with sclerotherapy could be considered with the goal of provoking analgesia and initiating the healing process. The aim is to showcase that surgical line of treatment can be a viable option when done in combination with photobiomodulation for management of infantile hemangiomas.

References

1. Khalid A et al.-Lobular capillary hemangioma of palatal mucosa of an infant-Journal of Pediatric Surgery Case Reports December 2021
2. De Oliveira MS et al. Photobiomodulation associated with sclerotherapy for treatment of hemangioma in the hard palate. *J Vasc Bras*. 2021

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1264

Schwannoma of Facial Nerve in Parotid Gland: A Tumour in Disguise

Dr. Bitra Deepti

Bapuji Dental College and Hospital, Davangere, Karnataka

Abstract**Introduction**

Schwannomas are slow growing, benign and condensed tumors with neuroectodermal descent arising from the nerve sheath. Many case reports have been previously published in which preauricular swellings have been misdiagnosed as pleomorphic adenoma based on preoperative investigations. Here we present a case of male who had painless, slow growing mass in right parotid region. USG guided FNAC suggested of pleomorphic adenoma. Superficial parotidectomy and facial nerve preservation was done.

Case Presentation

A 18 year old male presented with large, firm, mobile, non-tender preauricular swelling, slowly growing since 6 years. As per the history given by the patient, he was operated for the same 4 years back for same but it recurred 3 months after surgery. On clinical examination the facial nerve functions were normal. USG guided FNAC gave an impression of Pleomorphic Adenoma with well defined heterogeneous hypoechoic lymph node masses in preauricular region. CECT revealed ill defined heterogeneously hypodense lesion involving right parotid gland. Superficial parotidectomy with facial nerve preservation was done. The excised specimen was sent for histopathological examination which diagnosed as neurilemmoma of the parotid gland.

Discussion

Intraparotid Schwannoma should be considered as differential diagnosis in cases of preauricular swelling with no obvious facial nerve deficit. Though the literature is contradictory in identifying and differentiating Parotid swellings, the goal of resection and facial nerve preservation remains the standard treatment protocol For young Maxillofacial surgeons, a profound anatomical knowledge and use of hypotensive anesthesia, microdissection colorado needles along with microsurgical Loupes eases the intricacy of such surgeries.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 1268****Favourable Approaches to Diminish Recurrence of Odontogenic Keratocyst***Dr. Samkit**Dr. D. Y. Patil Dental College and Hospital, Pimpri, Pune-18.***Abstract**

Odontogenic keratocyst (OKC), is a benign locally aggressive cyst with a high recurrence rate. Several surgical modalities are advocated in its management. However, confusion still exists as to which method provides the lowest recurrence rates (RR) without significant morbidity. It's aggressive behavior has been addressed by either conservative or radical approaches. Conservative management includes enucleation and marsupialization/decompression. Adjuvant methods such as peripheral ostectomy, excision of the overlying oral mucosa cryotherapy and Carnoy's solution have shown promising outcomes. Radical methods involve mainly resection which yields the lowest RR although causes significant morbidity. The appropriate approach to diminish the recurrence rate with reduced surgical morbidity requires consideration of factors causing recurrence as well as preservation of vital structures (tooth roots, neurovascular bundle,

nasal cavity or maxillary sinus), perforation of the cortical plate, dimensions or age (younger patients experiencing higher RR). Only cysts that have perforated the cortical plate or recurrent ones should be subjected to radical bone resection. If restricted to the medullary bone, irrespective of the dimension, OKC should be addressed conservatively. We will be presenting our approach for the management of OKC including the rate of recurrence.

References

1. Titinchi F. Protocol for management of odontogenic keratocysts considering recurrence according to treatment methods. *JKoreanAssocOralMaxillofacSurg.*2020;46(5):358–360.
2. T. Kaczmarzyk, I. Mojsa, J. Stypulkowska: A systematic review of the recurrence rate for keratocystic odontogenic tumour in relation to treatment modalities. *Int. J. OralMaxillofac. Surg.* 2012; 41: 756–767.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 1283****Solid Variant of Aneurysmal Bone Cyst in an Unusual Site: A Case Report***Dr. Aakriti**M S Ramaiah University of Applied Sciences***Abstract****Introduction**

Aneurysmal bone cyst (ABC) is an uncommon pseudocystic osteolytic lesion usually affecting long bones and spine, rarely occurring in craniofacial region (1.9%). This is a case report of rare Solid Variant of Aneurysmal Bone Cyst (SVABC) occurring in anterior mandible.

Case Report

A 9 year old boy presented with a progressively increasing swelling over the chin for past 1 year. Examination revealed an ill defined bony hard tender swelling over the symphysis region. A provisional diagnosis of osteoma was made and the patient was investigated. OPG and CT FACIAL BONES revealed mixed radiopaque radiolucent lesion with altered trabecular pattern. Long bone survey were normal. Serum alkaline phosphatase was significantly increased. The patient underwent surgical curettage and histopathology revealed a solid variant of aneurysmal bone cyst.

Discussion

SVABC is an uncommon entity occurring in the first two decades of life, accounting for 5% of ABC. It comprises of solid and cystic blood filled areas without endothelial lining admixed with the presence of osteoclast like giant cells. The incidence of SVABC in mandible is 90% in posterior body and ramus, 9% in symphysis, 2% in condyle. The differential diagnosis include osteoma, telangiectatic osteosarcoma, central giant cell granuloma, hyperparathyroidism.

Conclusions

The practical importance of ABC lies in the difficulty of differential diagnosis from malignant tumors. This case was treated with surgical curettage considering the age of the patient and follow up of 1 year showed no recurrence.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 1287****Mandibular Access Osteotomies: Accessing the Inaccessible***Dr. Lavanya L., Dr. Arun Kumar K.**Tamilnadu Government Dental College and Hospital***Abstract****Abstract**

Primary tumours of the oral cavity and parapharyngeal space (PPS) which are inaccessible in routine procedures require an alternative technique to gain the access. PPS tumours are rare and account for only 0.5% of head, face, neck neoplasms. They represent a significant challenge to the surgeon, both in the diagnosis and appropriate surgical approach as mandibular ramus restricts superior and medial access to the PPS. A mandibular osteotomy is conventionally done to gain access to base of tongue (BOT) cancer as well as tumours of the base of skull. Incomplete surgical resection or rupture, particularly of neoplasms of salivary gland origin, predispose to tumour recurrence. A number of techniques have been described to facilitate access. These include anterior subluxation or dislocation of the mandible, division of the styloid process or stylohyoid ligament, resection of the mastoid process and mandibular condyle, and mandibular osteotomies. Access through osteotomy of mandible offers an adequate exposure to tumours of oral cavity and PPS. This poster aims at providing an insight into different mandibular osteotomies used to gain access to inaccessible head and neck tumours.

References

1. Kolokythas A, Eisele DW, El-Sayed I, Schmidt BL. Mandibular osteotomies for access to select parapharyngeal space neoplasms. *Head Neck*. 2009 Jan;31(1):102–10.
2. Lazaridis N, Antoniadis K. Double mandibular osteotomy with coronoidectomy for tumours in the parapharyngeal space. *Br J Oral Maxillofac Surg*. 2003 Jun;41(3):142–6.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 1307****Ameloblastoma***Dr. Prasad**Regional Dental College Guwahati Assam***Abstract**

Ameloblastoma is a benign neoplasm of epithelial origin. The tumor is locally aggressive but often asymptomatic showing a slow growth which is manifested as facial swelling or radiographical incidental

findings. Ameloblastoma can originate from remnants of dental lamina, enamel organ of developing tooth, basal cells of mucosa. It occurs in almost all ages but mainly diagnosed in third or fourth decades. Treated by surgical approach.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 1308****Recurrent Post Covid Mucormycosis***Dr. Sanjay Kumar Singh**Chandra Dental College***Abstract**

Mucormycosis is a rare opportunistic, aggressive, fatal fungal infection. The fungal organisms are ubiquitous and easily affect immunocompromised patients. It is spread on inhalation, inoculation and wound contamination and is more common in diabetic and other immunocompromised individuals in a population. The clinical and radiological features of Mucormycosis can overlap with other conditions for which a thorough diagnosis should be made. The rate of recurrence in Mucormycosis cases is high. The main aim of this article is to emphasize the importance of practicing aggressive resection and also on regular follow up of the patient after surgical management. Knowledge on different diagnostic and treatment methods, availability of newer drugs and regular follow up can greatly help in the management and recurrence of Mucormycosis even in immunocompromised patients in a population where diabetes is more common and mortality of rhino cerebral form is high.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 1325****Repair of Tongue Laceration***Dr. Dyna Albert**Saveetha Dental College and Hospital***Abstract**

Tongue is the muscular organ which is located in the oral cavity and helps in mastication, speech and taste. Laceration is the type of wound and it is defined as tearing of soft tissue. Tongue laceration is a rare phenomenon and it may happen due to trauma or self-inflicted. Laceration in the tongue may lead to hemorrhage, tongue shape modification, interference in speech and difficulty in breathing. Many of them are left untreated and healed by secondary intention. When wide attachment loss, bleeding and through and through lacerations

need repair. This poster is to depict the repair of the complex infected tongue laceration in a young male.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1339

Comparative Study Using Collagen Membrane, Buccal Fat Pad, Human Amniotic Membrane and PRF Along with ProSORB Mesh in the Surgical Management of Oral Submucous Fibrosis (OSMF)

Dr. Aarthee A.

Sree Balaji Dental College

Abstract

Many grafting materials have been used for the management of oral submucous fibrosis with varying results.

Aims and Objectives

The aim of the study was to compare different graft materials in the management of OSMF in terms of:

1. Amount of mouth opening achieved.
2. Granulation and epithelization in the immediate postoperative period.

Materials and Methods

A retrospective study was conducted on 40 patients with OSMF stages III and IV, where collagen membrane, buccal fat pad, human amniotic membrane (HAM), and PRF membrane along with proSORB mesh was used for the surgical management of OSMF. Amount of mouth opening was measured in mm using a scale. Epithelization and granulation was assessed by digital photographs and were graded as good, fair and poor.

Results

Mouth opening was significantly increased between the preoperative and postoperative periods for all the graft materials. Granulation and epithelization were better for collagen membrane followed by HAM and were graded as good, fair and poor.

Conclusion

Buccal pad of fat showed better results in terms of mouth opening followed by HAM 6 months postoperatively. HAM showed better outcome in terms of granulation and epithelization in the immediate postoperative period (follow-up for 1 month).

Reference

1. Saravanan K, Narayanan V. The use of buccal fat pad in the treatment of oral submucous fibrosis: a newer method. *Int. J. Dent.* 15;2012.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1357

Enucleation of Maxillary Dentigerous Cyst

Dr. Saba Naseem

AL Badar Rural Dental College and Hospital, Gulbarga, Karnataka

Abstract

Background

Dentigerous cyst is a cyst of jaw arising from the odontogenic epithelium. It develops by fluid accumulation between the reduced enamel epithelium and the crown of an unerupted tooth. Crown of impacted teeth are covered by the cyst. Its more prevalent in 1st, 2nd and 3rd decade of life. Commonly there is no pain or discomfort unless there is inflammation in the cyst. If left untreated then the cystic lining can get transformed into Ameloblastoma, squamous cell carcinoma, intraosseous mucoepidermoid carcinoma.

Case Report

A 24-year old male visited the OMFS Department of BVDU Sangli complaining of pain in upper left molar region. The panoramic radiograph and CT showed an impacted tooth (no. 28) located in the lesion causing expansion and destruction of posterior wall of left maxilla and occupying a large part of maxillary sinus. The patient underwent surgery under general anesthesia to remove the impacted tooth and the affected teeth. Histopathological analysis of the dental follicle confirmed the lesion as dentigerous cyst. The postoperative recovery was uneventful.

Aims and Objective

To enucleate dentigerous cyst with uneventful healing.

Material and Method

In this poster, enucleation of dentigerous cyst along with the removal of affected teeth is shown. Clinical and radiographic examination, led to the diagnosis of dentigerous cyst involving impacted 28.

Result

Complete enucleation was done and healing was uneventful.

Conclusion

Dentigerous cyst treated surgically provides excellent results and routine radiographs during teeth formation and eruption can lead to early diagnosis of dentigerous cyst.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1365

Management of Residual Oroantral Defect Post Mucormycosis Maxillectomy Using Buccal Pad of Fat

Dr. Premlesh Kumar Pal

Bharti Vidyapeeth Dental College Sangli

Abstract

Mucormycosis is an opportunistic fungal infection that presents with a characteristic destruction and necrosis of the bone and soft tissue affecting immunocompromised patients such as uncontrolled diabetics or on long term steroid therapy. Recently this opportunistic fungal infection has become rampant in patients affected with Coronavirus, Presenting with necrotic maxilla and multiple draining sinuses over the apices of the involved teeth, mobility of affected Maxillary teeth and blackish discoloration in the anterior hard Palate. Partial or Total Maxillectomy being an inevitable choice for the above mentioned condition leaves surgeon in a perplexed situation in rehabilitation of soft and hard tissue reconstruction. More often we encounter oronasal and oroantral communication amongst all the complications due to mucosal necrosis or dehiscence or due to retraction. The main objective of repairing these communications are to establish satisfactory physiological functions of the maxillary sinus and nasal cavity. Buccal Pad of Fat Flap is regularly used in the closure of oral and palatal defects with advantages like ease of harvest, adequate vascularity, assistance with multilayered closure, and potential to provide a gliding plane for surrounding tissue. We report a case of post Covid Mucormycosis, who underwent Partial Maxillectomy, presented with Oroantral communication on the upper right posterior region which was managed successfully using buccal pad of fat.

Reference

1. Pool C et al, Novel Use of the Buccal Fat Pad for Sinocutaneous Fistulae Closure and a Review of Reconstructive Options. *Annals of Otolaryngology*. 2021 May 25.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 1366****Extended Nasolabial Flap Compared with the Platysma Myocutaneous Muscle Flap in Surgical Management of OSMF Cases***Dr. Naksha S.**Faculty of Dental Sciences, Ramaiah University of Applied Science***Abstract****Background**

OSMF is a chronic inflammatory disease characterized by inflammation and progressive fibrosis of the submucosal tissues leading to difficulty in mouth opening.

Aim and Objectives

To compare the interincisal mouth opening, widening of oral commissure, viability of flap, dehiscence, between platysma and nasolabial flap.

Method

Patients are selected with respect to age, gender, socioeconomic status and caste. 14 randomly selected patients with histologically confirmed OSMF patients were taken. The age of the patients ranged between 18 and 60 years. The maxillary and mandibular 3rd molars were extracted. 7 patients were taken in nasolabial group and other 7 in platysma group. In the nasolabial group preop interincisal mouth opening was 11.29 mm [range 8–15 mm] and in platysma group was

10.43 mm [range 4–14 mm]. All patients underwent physiotherapy post-op.

Result

Age distribution of platysma group has mean age of 36.43 years with a SD 9.40 and of nasolabial group has a mean age of 32.71 years with a SD 11.31. Out of 7 patients in platysma group 4 (57.1%) are male and 3 (42.9%) are female, out of 7 patients in nasolabial group 5 (71.4%) are male and 2 (28.6%) are female. Postop pain in the 10th day in platysma group is 8.57 ± 0.98 and in nasolabial group is 9.14 ± 1.07 (recorded by Wong–Baker pain scale). The inter incisal mouth opening at 6-month post op for platysma group is 38.29 ± 2.36 (p -value < 0.001) and for nasolabial group it is 36.57 ± 1.62 (p -value < 0.001). Widening of oral commissure at 6-month post op for platysma group is 52.86 ± 1.86 (p -value < 0.001) and for nasolabial group is 55.00 ± 2.31 (p -value < 0.001).

Conclusion

Both methods were effective in the management of the oral submucous fibrosis except that extraoral scar and intraoral hair growth are the main area of concern in nasolabial group.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 1392****A Case of Desmoplastic Ameloblastoma Involving Left Anterior Maxilla***Dr. Shivansh Shekhar**Saraswati Dental College and Hospital***Abstract**

The desmoplastic variant of ameloblastoma is a rare form of ameloblastoma characterized by unique radiographic and histologic features. A 36-year-old female came to our hospital, complaining of swelling in the left upper front teeth region since 3 years. Radiographic findings revealed an ill-defined unilocular lesion on the left anterior maxilla. After the patient underwent hemimaxillectomy of left anterior maxilla, histologic analysis revealed a desmoplastic ameloblastoma. This tumor shows a predilection for the anterior maxilla and occurs most commonly in the third through seventh decades of life. It accounts for 4–5% of all ameloblastomas, these type of cases can be treated by segmental resection of the involving maxilla and followed by reconstruction for the same.

Category: Student: E-Poster**Theme: Oral and Maxillofacial Pathology****Reg. Num.: 1403****Familial Florid Cemento-Osseous Dysplasia: A Case Report***Dr. Pranali Patel*

AMC Dental College and Hospital

Abstract

Introduction

Benign fibro-osseous lesions of jaw though not uncommon, familial cases of such lesions are usually rare and are described under numerous terms including Familial Gigantiform Cementoma, multiple cemento-ossifying fibromas, sclerosing cemental masses and familial florid cemento-osseous dysplasia (FFCOD).

Aims and Objectives

To describe a case of familial florid cemento-osseous dysplasia and its management.

Methods

A 53 year old female reported with a complaint of pus discharge in 37 region. On examination, there was a sinus tract with pus discharge on the buccal aspect of 37. Orthopantomogram showed bulbous roots of 37 with fused sclerotic mass surrounded by a radiolucent rim with similar findings in multiple other teeth in both upper and lower jaws. Histopathology of extracted 37 was suggestive of cemento-osseous dysplasia with osteomyelitis. Patient was then taken up under general anaesthesia and total mandibular extraction along with extraction of 16 and 26 were performed with peripheral osteotomy, curettage followed by primary closure. Her sister was investigated radiographically and she displayed similar findings although asymptomatic.

Discussion

Benign fibro-osseous lesions are a myriad group of lesions that share similar histopathological features and are diagnosed in a combined assessment of clinical, radiological and microscopic features, some of these having a genetic susceptibility. FFCOD is inherited in an autosomal dominant fashion with variable expressivity. It is a non-neoplastic lesion and management is aimed at prevention of exposure of avascular bone to oral cavity.

Conclusion

FFCOD should be distinguished from other similar fibro-osseous lesions by its distinct clinical and radiographic presentation.

References

1. Familial florid cemento-osseous dysplasia: a report of 3 cases and review of literature, ChaneNel et al.
2. Florid cemento-osseous dysplasia: a case report, SaadettinDagistan et al.

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1439

Immunoglobulin Related Sclerosing Disease of the Mandible

Dr. Nadia Fernandes

Goa Dental College and Hospital

Abstract

Introduction

IgG4 related disease is a systemic, multifocal, immune mediated disorder that can affect multiple organs and may present as a tumor, with rare cases described in the maxillofacial region.

Aims and Objectives

To describe a case of immunoglobulin G4 related disorder.

Case Report

A 16 years old female reported with a complaint of difficulty in mouth opening since two months with swelling on the right side of the face. She had associated pain on attempting to open the mouth, localized to the right side of the jaw. Radiographic investigation as on MRI and CT scan showed a lytic lesion on the right ramus of the mandible giving rise to suspicious diagnosis of a cyst. Patient was taken under general anesthesia for biopsy and surgical site showed bulky masseter muscle with localized erosion of the ramus of the mandible. Histopathological report was suggestive of benign spindle cell neoplasm and on further investigation for immunohistochemistry revealed the diagnosis of IgG4 related sclerosing disease. Patient was put on long term steroid treatment and was managed as such.

Discussion

The IgG4-RD, is a newly recognized clinicopathological entity characterized by intense fibrosis and lymphoplasmacytic infiltration of involved tissues with a raised serum IgG4 level, classically involving the pancreas, hepatobiliary tract, major salivary glands, lymph nodes, orbit, and lungs. In the maxillofacial region, IgG4-RD usually involves the salivary, lacrimal, and pituitary glands.

Conclusion

IgG4 related disease although rare occurrence can also affect the oral and maxillofacial region, and diagnosis is based on clinic-pathological evaluation. Immunohistochemistry greatly helps in distinguishing the diseases.

References

1. Immunoglobulin G4-related sclerosing disease involving the mandible, Antonio CK Tong et al.
2. A Rare Case of IgG4-Related Sclerosing Disease of the Maxillary Sinus Associated With Bone Destruction, Clarence Pace et al. (JOMS, 2010).

Category: Student: E-Poster

Theme: Oral and Maxillofacial Pathology

Reg. Num.: 1518

Change in the Position of Hyoid Bone After Mandibular Set Back Surgery Using Bilateral Sagittal Split Ramus Osteotomy Technique

Dr. Sneha Rathee

Goa Dental College and Hospital

Abstract

Background and Objectives

Bilateral Sagittal Split Osteotomy (BSSO), is one of the most commonly performed jaw surgery, either with or without upper jaw surgery. Mandibular setback surgery can markedly improve the occlusion, mastication, speech, phonation and aesthetics in a patient with prognathic mandible.

Methods

20 individuals within the age range of 18–35 years underwent BSSO setback for mandibular prognathism. Evaluation of hyoid bone position using lateral cephalometric landmarks. Values were recorded and

tabulated under T0 (pre-operative), T1 (immediately post operative), T2 (6 months post operative).

Results

The study concludes that hyoid bone position alters significantly during BSSO setback moving in an inferior and posterior direction but tries to return to its normal position.

Interpretations and Conclusions

After mandibular setback surgery, the hyoid bone moved downward and backward immediately. Subsequent forward and upward movement towards the original position in the post surgical observation period but did not return to the exact original position.

References

- Riepponen, A., Myllykangas, R., Savolainen, J., Kellokoski, J., & Pahkala, R. (2017). Changes in posterior airway space and hyoid bone position after surgical mandibular advancement; 75(1), 73–78.
- Du, W., He, D., Wang, Y., Liu, H., Liao, C., Fei, W., & Luo, E. (2017). Upper Airway Changes After Mandibular Setback and/or Advancement Genioplasty in Obese Patients. Journal of oral and maxillofacial surgery: 75(10), 2202–2210.

Category: Student: E-Poster

Theme: Orthognathic and Aesthetic Surgery

Reg. Num.: 215

Evaluation of Articular Disc Position Before and After Mandibular Osteotomies: A Prospective Study Using Ultrasound Imaging

Dr. Reshma Gafoor

KMCT Dental College

Abstract

Background and Objectives

The purpose of the study is to evaluate the position of articular disc before and after bilateral sagittal split osteotomy for setback in skeletal class III patients. This study is intended to evaluate the changes in position of articular disc following BSSO setback using Ultrasonography as a screening tool.

Methods

20 individuals with mandibular prognathism were included in the study with informed consent. All patients were subjected to Ultrasound imaging of both TMJ (in open and closed mouth positions), before and 3 months after BSSO surgery.

Results

The results of the setback achieved and ultrasonographic investigation of articular disc positional change following setback was evaluated by Paired t test and Pearson correlation using SPSS software. Observation and analysis depicted very strong correlation between right and left TMJ articular positions in open and closed mouth conditions.

Interpretations and Conclusions

There is a significant correlation (correlation coefficient, $r = 0.8$ and P value < 0.0010) between changes in position of articular disc of right and left side following BSSO. It was concluded that bilateral symmetrical changes occur in articular disc position following BSSO setback on comparison with pre-operative values.

Reference

- Fang B, Shen G-F, Yang C, Feng Y-M, Mao L-X, et al. Changes in condylar and joint disc positions after bilateral sagittal split ramus osteotomy for correction of mandibular prognathism. International Journal of oral and maxillofacial surgery.2009;38(7):726–30.

Category: Student: E-Poster

Theme: Orthognathic and Aesthetic Surgery

Reg. Num.: 227

A Comparative Analysis of Two Different Techniques of Alar Base Cinch Suturing in Le Fort-I Maxillary Osteotomy: A Randomized Control Study

Dr. Shweta Sabu

KMCT Dental College and Hospital

Abstract

Background and Objectives

Maxillary osteotomy, more specifically Le Fort I osteotomy, results in appreciable changes to the nose. Freeing of facial muscles from the nasolabial area and the anterior nasal spine allows the muscles to retract laterally, which results in flaring, widening and raising of the base of the nose, which is commonly asymmetrical. This study was performed to compare the efficacy of two techniques of cinch suturing (conventional cinch suturing and modified cinch suturing) in Le Fort I osteotomy.

Methods

20 patients with skeletal facial deformities were treated with Le Fort I osteotomy. They were divided into two groups of 10 each, one group treated with a conventional cinch suture and the other with a modified technique and the results were compared.

Results

On comparison between efficacy of modified cinch suturing and conventional method, it was found that modified cinch suturing technique is more stable and effective in controlling alar width.

Interpretations and Conclusions

The study indicates that modified cinch suturing technique is more stable and effective in controlling alar width, whereas conventional alar technique produces more relapse, less effective and less stable to control alar width as compared to modified technique.

Category: Student: E-Poster

Theme: Orthognathic and Aesthetic Surgery

Reg. Num.: 263

Virtual Treatment Planning in Orthognathic Surgery

Dr. Anahita Ann Koruth

KMCT Dental College

Abstract

Purpose

The purpose of this poster is to present the process of 3D virtual orthognathic treatment planning and advances in computers and imaging that have permitted the adoption of 3d virtual planning protocols in orthognathic surgery, which may allow a paradigm shift when the virtual planning can be transferred properly.

Materials and Method

The different stages of the workflow process for routine 3D virtual treatment planning of orthognathic surgery have been described: (1) image acquisition for 3D virtual orthognathic surgery (2) processing of acquired image data toward a 3D virtual augmented model of the patient's head; (3) 3D virtual diagnosis and virtual treatment planning of orthognathic surgery; (4) 3D virtual treatment planning communication; (5) 3D splint manufacturing; (6) 3D virtual treatment planning transfer to the operating room; (7) 3D virtual treatment outcome evaluation. The protocols also consisted of surgical planning transfer using newly designed CAD/CAM splints, Patient Specific Impalnts-Patient Specific Cutting Guides followed by Surgical Navigation.

Conclusion

The most powerful aspect of 3D treatment planning of orthognathic surgery in the era of virtual imaging is the unprecedented potential for the evaluation of the treatment outcome. The paradigm shift to CAD/CAM splints, provide a reliable, innovative, and precise approach for the transfer of virtual orthognathic planning.

Category: Student: E-Poster

Theme: Orthognathic and Aesthetic Surgery

Reg. Num.: 304

Morphometric Analysis of Dry Human Mandibles to Assess the Position of Lingula, Course and Location of the Inferior Alveolar Nerve: An In-Vitro Study

Dr. Mevawala Mohmedadil

Bharti Vidyapeeth Dental College and Hospital

Abstract

Background

Knowing the exact location of anatomical landmarks is imperative for maxillofacial surgeons. Sagittal split ramus osteotomy (SSRO) is the workhorse procedure done for correction of mandibular deformities. Paraesthesia due to Inferior alveolar nerve injury was the common complication of SSRO. Therefore, this study tends to assess the safe distance of lingula and course of the inferior alveolar nerve to understand the anatomy of the structure that is prone to injury during surgery.

Aim

To assess the position of lingula, course of the inferior alveolar nerve canal after sagittal split ramus osteotomy in dry human mandible.

Material and Methods

Sagittal split ramus osteotomy was performed on right and left sides of 20 adult mandible. Position of lingula, evaluation of course of the nerve in the canal and location of canal were assessed with vernier

calliper and radiographs.^{1,2} The results were tabulated and statistically analyzed using paired-*t* test and chi-square test.

Results

Position of lingula from anterior border of mandible varies between right and left side of mandible which was statistically significant ($p = 0.04$). Curved course of canal was found in majority. Location of canal after split was found to be on the proximal side mostly.

Conclusion

Changes in position of lingula between the sides of mandible and variations has to be kept in mind as they can act as reference point for performing the SSRO. Course and location of nerve in canal has to be taken in account during surgery as they are important factors in determining paraesthesia.

References

1. Srimani P et al. Morphologic and Morphometric Analysis of Lingula in Localizing Mandibular Foramen with its Surgical Importance. 2017;6:6(4):1–6.
2. Anbiaee, N et al. A. Relationship of the Gonial Angle and Inferior Alveolar Canal Course Using Cone Beam Computed Tomography. 2015;12(10):756–63.

Category: Student: E-Poster

Theme: Orthognathic and Aesthetic Surgery

Reg. Num.: 364

“CONDYLAR SAG”: Enigma After Orthognathic Surgery

Dr. Kathirvel G.

Vinayaka Missions Sankarachariyar Dental College

Abstract

Maintaining the condyles in centric relation (CR) after bilateral sagittal split osteotomy (BSSO) in orthognathic surgery is one of the most challenging problems during fixation to obtain accuracy and stability of postoperative results and optimal temporomandibular joint (TMJ) function. It may result in unacceptable malocclusion, poor esthetic outcomes, and masticatory and TMJ functional impairment. Many techniques to position the condyles in the ideal CR position are by using surgical guides, rigid fixation, sonographic monitoring, and intraoperative navigation. Recent technique to position the condyle and ramus segments in centric relation using skeletal guides designed by computer-assisted designed and computer-assisted manufactured (CAD-CAM) technology which confirms precise control of the condylar segment in centric relation with stable centric occlusion using CAD-CAM guides during BSSO.

Category: Student: E-Poster**Theme: Orthognathic and Aesthetic Surgery****Reg. Num.:** 389**Modern Era in Orthognathic Surgery: A Tedious Process Made Easy Using Software Assistance!***Dr. Thongam Elizabeth**Shree Bankey Bihari Dental College and Research Centre***Abstract**

Recent advancements in the technology and interdisciplinary approach among Oral and Maxillofacial surgeon, Orthodontist and Bioscience Engineer is changing the face of Orthognathic surgery from a more tedious process involving cephalometric analysis and mock surgery over the model casts to a 3 dimensionally planned simulation surgery using computer based technology. Planned osteotomies can be replicable intra-operatively using 3D printing of the cutting jigs and occlusal splints which helps in precise osteotomy cuts and achieving preplanned occlusion. Through this poster we are presenting a case report of a 26 year old male with skeletal class III malocclusion due to right condylar hyperplasia managed with high condylar shave on the Right side Sagittal split osteotomy over the right Ramus, inverted L osteotomy of left ramus to correct the jaw deviation thus the facial asymmetry and B/L Lefort I osteotomy with Counterclockwise rotation of the Maxillomandibular complex to correct occlusal canting. Pleasing aesthetic results and satisfactory functional results were obtained.

Category: Student: E-Poster**Theme: Orthognathic and Aesthetic Surgery****Reg. Num.:** 570**Surgical Remedy for a Rare Masseteric Exaggeration***Dr. Meleti Venkata Sowmya**King George's Medical University, Faculty of Dental Sciences***Abstract**

Idiopathic masseter hypertrophy is one of the rare conditions which results in enlargement of the masseter muscle and which is sometimes associated with bony exostosis at the mandibular angle region. It can be unilateral or bilateral. Most patients complain of facial asymmetry; however, symptoms such as trismus, protrusion, and bruxism may also occur. Here we are presenting a case of a 19 year old female patient with unilateral masseteric hypertrophy with bony exostosis at the angle of the mandible on the right side where surgical excision of the deep fibers of masseter muscle along with removal of excess bone at the outer cortex of the right angle of the mandible was carried out and patient was followed up for a period of 2 months at a weekly interval post operatively.

Category: Student: E-Poster**Theme: Orthognathic and Aesthetic Surgery****Reg. Num.:** 581**Digital Dental Splints in Orthognathic Surgery***Dr. Adhithia Govind**Sri Hasanamba Dental College and Hospital***Abstract****Aim**

The aim of the study was to evaluate the accuracy of fit of digital dental splints in an anatomically articulated model on which model surgery was performed.

Methods

A cone beam computed tomography scan was obtained with fiducial titanium markers glued to the attached gingiva. The upper and lower impressions were made and models prepared. The dental casts were scanned with optical scanner and saved as stl files. The CBCT scans and the digital dental scans were imported into MIMICS software. Planned virtual osteotomy was performed virtually on the 3d reconstructed models after accurate superimposition based on markers. Intermediate splints were virtually designed and 3d printed by importing into 3d printer.

Results

The fit of the digital dental splint was subjectively superior to the conventional acrylic splints and therefore was clinically more acceptable.

Conclusion

The results of this study indicates that virtual planning and 3d printing of the intermediate splints have the following advantage of an overall decrease in the time required for conventional planning, aids in better understanding of the existing deformity in all dimensions, use of fiducial markers ensures more accuracy in splint fabrication.

Category: Student: E-Poster**Theme: Orthognathic and Aesthetic Surgery****Reg. Num.:** 620**Artificial Intelligence: Applications in Orthognathic Surgery***Dr. Harney M.**Ragas Dental College and Hospital***Abstract****Introduction**

Artificial Intelligence is the ability of a computer or a robot controlled by a computer to do tasks that are usually done by humans. It has now gone onto invade the field of medicine. The last 5 years have shed some light on very promising applications of AI in radiology,

dermatology and oncology. Herein, we present and potential future applications of AI in the field of orthognathic surgery.

Materials and Methods

The impact of digital solutions on surgical-orthodontic protocols can be grouped in the following 4 domains:

1. Improved diagnostic precision using AI enhanced maxillofacial imagery.
2. Treatment planning using 3D models.
3. CAD/CAM manufacture of custom orthodontic and surgical appliances and equipment;
4. Improved therapeutic follow-up due to finer interval comparison of results using image superimposing.

Results

This AI paradigm change brings with it several obvious beneficial effects: the passage from 2 to 3D imagery along with added benefits of increased diagnostic precision; the possibility to visualize the treatment plan and engage patients and practitioners in a constructive dialogue. This limits confusion and brings a unique treatment plan for each patient using the CAD/CAM technology; the assistance and collaboration of a software capable of assisting practitioners in all steps from treatment planning to treatment follow-up.

Discussion

Elaborating a treatment plan in orthognathic surgery is based on three main components. The first component is a basic knowledge in the fields of craniofacial anatomy, orofacial functions, dysmorphisms and their etiologies, as well as surgical techniques. The second component is linked to the artistic sense of each physician. The third component is the patient's demand for a treatment.

Category: Student: E-Poster

Theme: Orthognathic and Aesthetic Surgery

Reg. Num.: 882

Evaluation of Soft Tissue Changes in AMD versus Orthognathic Surgeries in Cleft Patients: A Retrospective Study

Dr. Syeda Zayba Nayyer

KLE Society's Institute of Dental Sciences

Abstract

Purpose

The objective of this retrospective study is to compare the soft tissue changes after maxillary advancement using conventional orthognathic surgery (CO) and anterior maxillary distraction (AMD) in patients with cleft lip and palate (CLP).

Materials and Methods

The study consists of 30 CLP patients, 15 in each group, with maxillary hypoplasia underwent either CO or AMD with 5–13 mm of maxillary advancement. Lateral cephalographs were taken preoperatively and postoperatively at regular intervals. A series of skeletal, dental, and soft tissue landmarks was used to evaluate the changes in the soft tissue and the correlation of hard and soft tissue changes and ratios.

Results

Significant differences were found between the CO and AMD patients at point A in both maxillary advancement and down grafting

postoperatively. On soft tissue landmarks of pronasale, subnasale, and labial superius, significant differences were found between the 2 groups postoperatively only with maxillary advancement. There was better correlation of hard and soft tissue changes with maxillary advancement. The nasal projection was significantly different between the 2 groups postoperatively. There was much more consistent hard to soft tissue ratios in maxillary advancement with AMD than with CO.

Conclusions

Both CO and AMD can induce significant soft tissue changes of the upper lip and nose, particularly with maxillary advancement. AMD generates more consistent hard to soft tissue ratios.

Category: Student: E-Poster

Theme: Orthognathic and Aesthetic Surgery

Reg. Num.: 924

Alar Cinching

Dr. Sushma N.

Bangalore Institute of Dental Sciences

Abstract

Orthognathic surgery has an influence on the overlying soft tissues of the translated bony maxillomandibular complex. The associated soft tissue changes accompany total maxillary surgery are often favourable. However, if precaution has not been taken, an unwanted change to the soft tissues, especially in the external nasal morphology or nasal aesthetics can occur, following anterior or superior repositioning of maxilla. The most common secondary change in the nasal region is widening of the alar base. This occurs due to detachment of the paranasal muscles during the dissection (Nasalis Muscle). To minimize this underside effect on alar base various surgical techniques have been developed. Techniques for controlling lateralization of the ala, includes the alar base cinch technique, which was originally described by Millard and have been well reported by Collins and Epker. Later Bell and Proffit described adjunctive techniques to ensure an esthetic reconstruction of the alar base which were later modified by others. The purpose of this e-poster is to describe various alar cinch techniques which were developed and are employed for minimizing the widening of the Alar Base.

References

1. Peterson's principles of oral and maxillofacial surgery, 2nd edition by Michael Miloro, B.C. Decker, Inc., Hamilton, 2004, 1500 pp, volume 2 page 1225,1236
2. Liu X, Zhu S, Hu J. Modified versus classic alar base sutures after LeFort I osteotomy: a systematic review. Oral Surg Oral Med Oral Pathol Oral Radiol. 2014 Jan;117(1):37–44. <https://doi.org/10.1016/j.oooo.2013.09.002> PMID: 24332326.

Category: Student: E-Poster**Theme: Orthognathic and Aesthetic Surgery****Reg. Num.: 928****Botox in Facial Esthetics***Dr. Kanishk Srivastava**Thai Moogambigai Dental College and Hospital***Abstract**

The use of botulinum toxin for facial enhancement is the most common cosmetic procedure currently worldwide. Botulinum toxin acts on the presynaptic terminal of the neuromuscular junction by reversibly inhibiting the release of acetylcholine, which results in temporary muscle weakening or paralysis intra- or perimuscular injections (Figure) weaken the effect of periocular muscles, diminishing glabellar lines (procerus and corrugator muscles), forehead rhytids (frontalis muscle), crow's feet (lateral orbicularis oculi muscle), or the so-called bunny lines on the dorsolateral nose (nasalis). In the upper face, botulinum toxin is also used as a perioperative adjunct, as well as for chemical brow elevation and widening of the eyes. Botulinum toxin injections can offer safe and extremely rewarding outcomes for patients.

Category: Student: E-Poster**Theme: Orthognathic and Aesthetic Surgery****Reg. Num.: 976****Flip Genioplasty to Correct Facial Asymmetry in a Patient with TMJ Ankylosis: A Case Report***Dr. Poornima Reddy**AJ Institute of Dental Sciences***Abstract****Introduction**

Temporomandibular joint (TMJ) ankylosis, when it occurs in early childhood, will have devastating effects on the future growth and development of the jaws and teeth with obvious facial deformity including the chin. Genioplasty has been the treatment of choice in the management of chin deformities since decades. In unilateral TMJ ankylosis, the chin deformity is unique. The severity of the deformity is proportional to the time lag between the onset of TMJ ankylosis and the treatment, which worsens with advancing age, and the time elapsed between the onset of ankylosis and the treatment instituted.

Aim

To evaluate the efficacy of flip genioplasty to correct facial asymmetry in a patient with TMJ ankylosis.

Materials and Methods

A 24 year old female reported to the department of oral and maxillofacial surgery in our institute with chief complaint of reduced

mouth opening and facial asymmetry who was operated for TMJ ankylosis with micrognathia-2 stage procedure.

1. Distraction osteogenesis.
2. Flip genioplasty along with removal of ankylotic mass.

Post op CBCT was done to ensure the corrected facial asymmetry.

Result

Improved mouth opening from almost nil to 30 mm was achieved after the surgery and we were successfully been able to correct the midline shift by flip genioplasty.

Conclusion

It is strongly recommended for use of this new but effective and efficient method of genioplasty in the management of chin deformities associated with long-standing unilateral TMJ ankylosis of adults.

Category: Student: E-Poster**Theme: Orthognathic and Aesthetic Surgery****Reg. Num.: 1048****Planing the Future***Dr. Adnan Fakhruddin Chhatrivala**Dr. DY Patil Vidyapeeth***Abstract****Introduction**

The purpose of this case presentation was to measure and compare the working time for virtual surgical orthognathic planning (VSP) in comparison to conventional surgical planning (CSP).

Case Presentation

A. 24-year-old female was presented with a skeletal Class II. The lateral cephalogram was then traced using standard cephalometric landmarks, and facial photographs were superimposed onto the traced cephalogram. Subsequently, treatment planning was performed in accordance to facial and cephalometric analysis. The prepared casts were then mounted in an articulator. Splint fabrication was done. The two-jaw procedure was performed according to the conventional plan. B. 26-year-old male was presented with a skeletal Class III. Following presurgical orthodontics high-resolution computer tomography scan was performed. Stack images were reformatted into a three-dimensional structure. Virtual Le Fort-I and BSSO osteotomy was performed and skeletal class III was corrected with help of 3D planning software. Virtual intermediate surgical wafer was designed and produced with 3D rapid prototyping technology. The two-jaw procedure was performed according to virtual plan.

Discussion

The CSP can be utilized for single jaw surgery, as it represents simpler movement and does not require time for multiple splints fabrication, where the VSP provided accurate planning outcomes. Limitations of this include, that CSP has more confounding factors compared to VSP methods in complex surgery.

Conclusion

The benefits of VSP include increased efficiency of workflow and accuracy in planning complex craniomaxillofacial surgical interventions.

Category: Student: E-Poster**Theme: Orthognathic and Aesthetic Surgery****Reg. Num.: 1072****Non-Invasive Techniques to Manage Non-healing Ulcer***Dr. Stephenson George Samyo**Madha Dental College and Hospital***Abstract**

Non-healing ulcers are a common phenomenon, which results in substantial patient morbidity and impairment of the in Quality of life. Placentrex, amniotic membrane, megaheal, collagen dressing etc. are the non invasive methods for management of non healing ulcers. The amniotic membrane is of interest because of its properties of promoting epithelialization and granulation, infection control and pain reduction. Furthermore it is cheap, easily available, easy to preserve and apply. Collagen heals by forming a regranulation tissue when compared to conventional betadine dressing and thus reducing the - days of hospital stay. Placentral extract gel and cream are both effective topical agents for chronic non healing wounds, and also there is less pain and discomfort during dressing change.

Category: Student: E-Poster**Theme: Orthognathic and Aesthetic Surgery****Reg. Num.: 1216****Evaluation of Dolphin's Prediction Imaging with Postoperative Clinical Images***Dr. Jyoti Priya**A B Shetty Memorial Institute of Dental Sciences, Mangalore***Abstract****Aim**

The aim of this retrospective study was to evaluate the accuracy of soft tissue prediction done using Dolphin's Imaging preoperatively with postoperative clinical photographs.

Materials and Methods

Preoperative image, Dolphin's prediction and postoperative clinical photographs of 6 patients who had undergone orthognathic surgery were retrospectively collected. Dolphin's imaging software is a 3D soft tissue prediction tool used to predict the surgical outcomes in orthognathic surgery. Three evaluators, a maxillofacial surgeon, an orthodontist and a commoner, were shown the preoperative image and then were blinded to Dolphin's imaging and postoperative photograph. They were asked to evaluate which had achieved better outcome and was more aesthetic. The results of this study will be discussed in the presentation.

Keywords Dolphin's prediction, Orthognathic surgery.

Category: Student: E-Poster**Theme: Orthognathic and Aesthetic Surgery****Reg. Num.: 1320****The 'Snags' in Orthognathic Surgeries***Dr. K. Krishna Teja**S.V.S. Institute of Dental Sciences***Abstract**

Complications in orthognathic surgery may arise as a result of events at any point in the timeline of the patient's treatment: during preoperative planning, perioperative orthodontic care, or during the surgery itself. This poster primarily addresses the complications that arise as a result of the intraoperative technique. Complications may be characterized by type: airway, vascular, neurologic, infectious, skeletal and although the relevant anatomy differs, most of these complications may occur with either maxillary or mandibular procedures. One also can define complications by the associated procedure viz, LeFort I type osteotomy and segmental osteotomy, bilateral sagittal split osteotomy (BSSO), segmental osteotomy, and genioplasty.

Category: Student: E-Poster**Theme: Orthognathic and Aesthetic Surgery****Reg. Num.: 1331****Alt Perforator Flaps in Head and Neck Reconstruction: Our Experience of 100 Cases in a Tertiary Care Centre***Dr. Subhajit Das**A B Shetty Memorial Institute of Dental Sciences***Abstract****Introduction**

Free flaps has revolutionized the management of complex head and neck defects in which perforator flaps represents the most recent advancement. These flaps are based on perforating vessels and can be harvested without significant damage to associated muscles, thereby reducing the postoperative morbidity. The major advantage being that an unlimited number of flaps can potentially be designed on much shorter pedicles. The ALT flap is the most commonly used perforator flap in head and neck reconstruction.

Materials and Method

A total of 100 patients with complex defects of head and neck who reported to VIMS and RC and underwent reconstruction with ALT flap were included in the study. The functional and aesthetic outcomes of these patients were reviewed by using the following scales: University of Washington Quality of Life questionnaire, functional intraoral Glasgow scale and the Vancouver scar scale.

Results

All the patients had satisfactory functional and aesthetic outcome with minimal change in phonetics. As primary closure was achieved, necessity of third surgical site for a split skin graft was avoided. Donor site function was assessed where function was not found to be hampered.

Conclusion

Reconstructive surgery must strike a balance between oncologic cure and minimizing morbidity and optimizing the quality of life. Our experience suggests that complex head and neck defects can be safely reconstructed with perforator based ALT flaps with good functional and aesthetic outcomes, minimal morbidity and quick recovery.

Category: Student: E-Poster Theme: **Reconstructive Surgery**

Reg. Num.: 144

The Realm of Patient-Specific Implant (PSI) in Maxillofacial Surgery

Dr. Sagarika Khowala

Vydehi Institute of Dental Sciences and Research Centre

Abstract

Patient-specific implants (PSI) have revolutionized the reconstructive procedures of the maxillofacial skeleton. Due to the complex anatomy and need for optimal rehabilitation of patient's function and symmetry these defects are often challenging even for the most seasoned surgeons. The advent of additive manufacturing, 3-dimensional (3D) printing, rapid prototyping machines have positively influenced the biomedical field, leading to the utilization of patient-specific implants (PSI) for the surgical repair of maxillofacial defects. Autogenous grafts are still considered to be the gold standard for reconstruction. However, they are often associated with unpredictable resorption and donor site morbidities. Introducing new technology in the field of reconstructive craniomaxillofacial surgery, PSI offers high accuracy, better site adaptation, and reduces the duration of surgery. Titanium PSI, thermoplastic materials such as polyether–ether–ketone (PEEK) have also been successfully used in the reconstruction of the facial skeleton. PSI plays a productive role in orthognathic surgery, reconstruction of faciomaxillary defects, and management of extensive maxillofacial trauma. The use of PSI aids in achieving precise restoration of the anatomical area with complex geometry and better aesthetic outcome which improves patients' overall well-being. It has also replaced the concept of "one-size-fits-all" approach in the practice of maxillofacial surgery.

References

1. Huang MF, Alfi D, Alfi J, Huang AT. The use of patient-specific implants in oral and maxillofacial surgery. *Oral Maxillofac Surg Clin North Am.* 2019 Nov 1;31(4):593–600.
2. Allasseri N, Alasraj A. Patient-specific implants for maxillofacial defects: challenges and solutions. *Maxillofacial Plastic and Reconstructive Surgery.* 2020 Dec;42:1–8.

Category: Student: E-Poster**Theme: Reconstructive Surgery**

Reg. Num.: 236

Use of Amniotic Membrane versus Collagen Membrane in the Management of Oral Submucous Fibrosis

Dr. Ayisha

MES Dental College

Abstract

Oral submucous fibrosis is an insidious chronic disease affecting the mucosa or any part of the oral cavity and occasionally extending into the pharynx and Esophagus, leading to stiffness of oral mucosa causing trismus. Management of oral submucous fibrosis either conservatively or surgical depends on the clinical staging of the condition. Surgical resection of fibrotic bands followed by covering the defect with some grafts or flaps yield good results. Different grafting materials are used for Reconstruction of surgical defects in the OSMF. This paper emphasizes the efficacy of Amniotic membrane and Collagen membrane in relation to healing and post-operative mouth opening in surgical management of stage-III Oral Submucous Fibrosis.

Keywords Oral submucous fibrosis, Amniotic membrane, Collagen, Reconstruction

Category: Student: E-Poster**Theme: Reconstructive Surgery**

Reg. Num.: 268

Viability of Power Horse: Pmmc Flap Uncut Significance in Modern Era

Dr. Pasham Tulasi

Mamata Dental College, Khammam, Telangana

Abstract

India has the largest number of oral cancer cases and 1/3rd of total burden globally. The surgical correction of which is of main concern. The pedicled pectoralis major myocutaneous flap (pmmf), used for the reconstruction of surgical defects in advanced oral cancers resection is versatile and can be obtained without a highly invasive procedure. Provides good coverage, easy to obtain and can be performed in same operative field with excellent aesthetic results in ablative oncology procedures in head and neck. The e-poster is to make known of pmmf and its viability in this era of recent advancements which suggest microsurgical reconstruction as more advantageous for a defect. Cases done under our own institution are shown which are Evaluated for site and size of the defect, type of flap, complications of donor and recipient site. Pmmf exhibited easy availability with lesser learning curve requirement and high degree of reliability and minimal complications in the lesion itself and the donor site in Indian setting. In these times it still remains a useful tool and a fall-back option in case of free flap failure in head and neck reconstruction.

Reference

1. Tripathi, M., Parshad, S., Karwasra, R., & Singh, V. (2015). Pectoralis major myocutaneous flap in head and neck reconstruction: An experience in 100 consecutive cases. *National Journal of Maxillofacial Surgery*, 6(1), 37.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 295****Repair of Post-Traumatic Ptosis of Left Eye***Dr. Aashish Kemmu**College of Dental Sciences Davangare***Abstract**

Blepharoptosis or ptosis refers to an abnormal lower than normal upper eyelid position resulting from narrowing of vertical dimension of palpebral fissure. Most patients of ptosis are found to have lost their superior field of vision to 30 degrees or less. Surgical repair of ptosis is indicated when the upper eyelid interferes with the visual axis or when the patient has psychological distress due to compromised cosmetics. The treatment modalities for repair of ptosis are frontalis sling, resection and advancement of the levator aponeurosis, Whitnall sling procedure, Muller's muscle-conjunctival resection. Resection and advancement of the levator aponeurosis can be used for correction of ptosis with good levator function. Advantage of this technique is the lack of an implant, ability to customize the amount of eyelid elevation intra-operatively, smaller skin incision, good cosmetic results, less surgical time, rapid recovery. This poster is presenting a case of a 30 years male patient who presented to the OPD of Department of OMFS, MGDH with a history of reduced left eye opening following trauma. Provisional diagnosis of 3rd cranial nerve palsy was made, following neurological and ophthalmological examination. The patient was operated with resection and advancement of levator aponeurosis under LA using superior eyelid crease incision. The amount of levator to be resected was determined by placing eyelid at the desired position, then redundant levator aponeurosis was excised. The excised levator was then reattached to the anterior surface of tarsus. Post-operative follow up was satisfactory.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 314****Materials Used for Orbital Floor Reconstruction***Dr. Tamanna Jamwal**Mahatma Gandhi Dental College and Hospital, Jaipur***Abstract**

Orbital fractures are the most common fractures of the midface. Advances in biotechnology continue to introduce new materials for reconstruction of orbital floor fractures. There are many materials for orbital floor reconstruction. An ideal material which is apt for orbital floor reconstruction, is still a debate! The reconstruction of orbital floor is a challenging procedure, which requires sound anatomic knowledge, good skill and experience. The orbital region is the weakest region, which cannot bear such a load. There are notable approaches for the repair of orbital floor, namely, transconjunctival, sub-ciliary, mid lower eyelid, infraorbital and endoscopic trans-antral approaches. Materials used for orbital floor reconstruction are classified as autologous, allografts, xenografts, and alloplastic materials. Autologous grafts include bone and cartilage. Allogenic materials include irradiated bone, lyophilized cartilage and lyophilized dura. Alloplastic materials are classified as porous/non-metallic, non-porous/metallic and resorbable materials. The ultimate goal for orbital floor reconstruction is to restore the form and function of internal orbit, thereby avoiding complications of the procedure and implant. The material should be osteoconductive, resorbable, resistant to infection, cheap and easily available. The advantages of autologous bone are its inherent strength and rigidity and disadvantages are, it cannot be used in defects of large area. Whereas, in allografts, they can be prefabricated, reduced operating time and tissue availability. Disadvantages are unpredictable resorption and complication like disease transmission. Alloplastic materials are easy to work and complicated.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 320****Transcranial Orbital Reconstruction Using Patient-Specific Implant Prosthesis in Craniofacial Fibrous Dysplasia***Dr. S. S. Shanjay**Sree Balaji Dental College and Hospital, Pallikaranai, Chennai, 600100***Abstract**

Virtual surgical planning (VSP) has many applications in Oral and Maxillofacial surgery, such as preoperative planning, fabrication of cutting guides and stereolithographic models, and fabrication of custom implants. VSP allows surgeons to plan resection and reconstruction prior to surgery. Reconstructing maxillofacial defects is challenging for most surgeons due to the region's complex anatomy and cosmetic expectations on patients. Patient-specific implant (PSI) is a personalized approach to reconstructive and esthetic surgery. CAD/CAM technology allows for the fabrication of patient-specific cutting guides and patient-specific reconstruction plates used for accurate and efficient reconstruction of complex maxillofacial defects. Biomaterials such as porous High-density polyethylene (pHDPE), Polyetheretherketone (PEEK) and titanium are mostly used in PSIs. This Poster deals our experience of 5 cases of reconstruction of maxillofacial defects using 3D printed patient-specific prosthesis.

The follow-up data showed good outcomes with reliable results of PSI in maxillofacial reconstruction.

Category: Student: E-Poster

Theme: Reconstructive Surgery

Reg. Num.: 334

Patient Specific Implants Following Maxillectomy

Dr. Frijo Xavier

All India Institute of Medical Science, Raipur

Abstract

Reconstruction of maxilla defects has remained one of the most challenging problems for most surgeons in craniomaxillofacial reconstruction following various maxillofacial pathologies, due to the region's complex anatomy and cosmetic and functional effects on patients and it typically requires harvesting and grafting of autologous bone, which poses limitations related to the difficulties in accurately reconstructing the defected bone and the highly prolonged duration of surgery. The use of pre-made alloplastic implants and autogenous grafts is often associated with resorption, infection, and displacement. Recent technological advances have led to the use of custom computer-designed patient-specific implants (PSIs) in reconstructive surgery. This study describes my experience with PSI, details the complications faced, how to overcome them, and finally, evaluates patient satisfaction.

Category: Student: E-Poster

Theme: Reconstructive Surgery

Reg. Num.: 352

Customized Polyether Ether Ketone (Peek) Implants for Maxillofacial Reconstruction

Dr. Gowri Shankar B.

Krishnadevaraya College of Dental Sciences and Hospital, Bangalore

Abstract

Extensive maxillofacial defects resulting from trauma, oncologic resections and resections due to recently hyped mucormycosis present reconstructive challenges. Numerous autogenous and alloplastic materials have been used in maxillofacial reconstruction namely regional flaps like temporalis myofascial flap, free flaps like fibula, radial forearm flap, rectus abdomen flap and methyl methacrylate obturator, silastic porous polyethylene (medpor) and titanium mesh respectively. All have associated disadvantages like resorption and donor site morbidity incase of autogeneous materials and poor workability and compatability incase of alloplastic materials. This made the search for ideal implant continue. A potential candidate is

'polyether ether ketone' (PEEK), a semicrystalline polyaromatic linear polymer with excellent strength, stiffness and durability. Biocompatibility was established recently into medical afflications and with the help of CAD/CAM, 3D-printing technology and these properties of PEEK, patient specific custom made implants for maxillofacial defects can be made and this can revolutionize the reconstruction results in maxillofacial defects. The properties of PEEK and process of customising the implants and interlocking implants for the larger defects which needs less exposure and small access to the defect site are added advantages.

References

1. Kim, Michael et al. (2009). Use of Customized Polyetheretherketone (PEEK) Implants in the Reconstruction of Complex Maxillofacial Defects. Archives of facial plastic surgery. 11. 53–7. <https://doi.org/10.1001/archfaci.11.1.53>
2. Godoberto Guevara-Rojas et al. Patient specific polyether ether ketone facial implants in a computer aided planning workflow. J. joms.2014.02.013.

Category: Student: E-Poster

Theme: Reconstructive Surgery

Reg. Num.: 361

Use of Patient Specific Implant to Optimize the Position of the Fibula Segment Placement for Dental Rehabilitation

Dr. K. Yamuna

Government Dental College and Hospital, Kadapa

Abstract

Surgery, radiation and chemotherapy has become standard life saving treatment in head and neck cancer patients. However surgery may lead to discontinuity in the mandible which affects the dental function and facial aesthetics. Several options are available for reconstruction, including vascularized bone grafts combined with load-bearing reconstruction plates. The vascularized free fibula flap is often the first choice for Mandibular reconstruction. The reconstruction of the mandible and the required contouring of the osseous fibula flap, are dependent on mini- or reconstruction plates that need to be adjusted intra-operatively based on the outer contour of the original mandible, which fails to provide the original contour, normal function and dental rehabilitation. Main issue with implant placement for dental rehabilitation in a reconstructed fibula is its height discrepancy in relation to the native alveolus. Several methods have been described to provide dental rehabilitation like superior placement of fibula, double barreling, use of long implant but they failed to satisfy either function or esthetics. Development of patient specific implant with modification for dental implants allows fibula to be placed in a higher position suitable for maintaining the best implant height, maintain lower border contour avoiding a contour deformity, and allows condylar and TMJ reconstruction simultaneously if needed.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 365****Computer-Aided Position Planning of Miniplate to Treat Facial Bone Defects***Dr. Subiramaniyan**Amrita School of Dentistry***Abstract**

Reconstructions of facial deformations and defects secondary to maxillofacial fractures is a part of a surgeon's clinical practice. Accidents resulting in facial such fractures require fixation with the application of varying osteosynthesis materials such as miniplates is essential. For facial reconstructions, the miniplates cannot be deployed in their stiff and straight initial form, it is necessary to adapt them along the fractured surface to gain a perfect adaptation using a necessary tool and this is being done could be time-consuming. An alternative method is to generate a stereolithographic (STL) model out of the computed tomography (CT) scan data and be able to fabricate/pre-bend the implants on the model to gain perfect adaptation of the hardware to the fractured fragment. This method may be time consuming but superior in achieving desired results. This poster showcases a software system for computer-aided position planning of miniplates to treat facial bone defects.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 366****Condylar Positioning in Mandibular Reconstruction***Dr. Nithin Shaju**Dayananda Sagar College of Dental Science***Abstract**

The 3 dimensional structure, movable condyle, bony interferences and complicated occlusion are the most common challenging factors for reproducing the native position of the mandible during reconstruction. Even though the creation of more accurate osseocutaneous free flap contour to original mandible has been considered as the successful clinical outcome, the precise repositioning of temporomandibular joint in its fossa after resection has also been a crucial factor and criteria for better functional outcomes. The displaced ipsilateral and contra lateral condyle in long term follow up may induce various TM joint dysfunction such as limited mouth opening, pain, clicking, deviation malocclusion and problems in mastication and deglutition. Therefore the preservation of the condyle and maintaining its preoperative dimensions during free fibula mandibular reconstruction can improve TMJ functions and may help reduce the

incidence of complications after mandibular reconstruction. Condylar position can be measured based on the corresponding dimensions of radiographic joint spaces between the mandibular condyle and the glenoid fossa. Computed tomography (CT) provides optimum images of osseous components of the TMJ and it is a practical choice for evaluating condylar displacement after mandibular reconstruction. The operating surgeon should consider the complications during their initial treatment planning, while performing reconstruction and also during prognosis prediction.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 386****Tissue Engineering in Maxillofacial Reconstruction***Dr. K. Surya**Amrita School of Dentistry***Abstract**

Tissue engineering offers an innovative and exhilarating substitute for maxillofacial reconstruction. It supplements existing treatment regimens for reconstruction/regeneration of oral and craniofacial complex which includes the teeth, periodontium, bones, soft tissues, salivary glands, TMJ, blood vessels, muscles, tendons and nerves. Tissue engineering is a process of harvesting a stem cell which has potential to form an organ. Harvested cells are then transferred into scaffolds to resemble the structure of desired tissue to be replaced. This poster reviews the principles of tissue engineering and its various application in oral and maxillofacial surgery.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 401****Tissue Expansion in Reconstruction of Maxillofacial Defects***Dr. Vignesh K.**Best Dental Science College, Madurai***Abstract**

Tissue expansion in its natural ways had fascinated man from pre historic times. But for medical purposes was tried and used in early half of twentieth century. Current principle of self-inflating soft tissue expanders is being used in reconstruction of many hard and soft tissue defects of larger dimensions regarded as great challenge to maxillofacial and plastic surgeons. The current challenge in the field is to deliver a material with suitable protracted swelling response, ideally with an induction followed by linear increase in volume lasting for several days for tissue reconstruction. Making use of viscoelastic

nature of skin and tissue expansion based on tissue engineering is possible in maxillofacial region. The surgical use of bone grafts example alveolar bone grafts is essential in treatment of many pathologies, but often difficult due to periosteal deficiencies leads to necessity of grafting prior to bone surgery. Distant bone grafts often lead to surgical site morbidity and post operative infections. The use of tissue expanders produces excess periosteal tissues lead to success in clinical setting. Advantages include better wound closure without compromising blood supply of flap, augment the bone and their transfer is safer due to high vascularization. However, swelling expansion determined after in vivo implantation seems to be rather fast so future challenge remains the design of materials that exhibit a slower, close to linear volume expansion. These aspects will be topic for future research.

Category: Student: E-Poster

Theme: Reconstructive Surgery

Reg. Num.: 466

Endogenous Bone Formation Following Mandibular Transport Distraction Osteogenesis: A Novel Technique and Case Report

Dr. B. Poojitha, Dr. Mamatha Bunga

Mallareddy Dental College for Women

Abstract

One of the greatest challenges in maxillofacial surgery is reconstruction after resection of the pathologies involving large area of mandible. Mandibular reconstruction goals include restoring the continuity of missing bone segment, providing foundation for dental restoration, esthetics. Techniques vary from non-vascularised bone grafts, vascularised bone grafts, alloplastics (alloplastic implant), transport distraction osteogenesis. Transport distraction Osteogenesis is a novel technique to reconstruct defects following mandibular resection. Its advantages are that it does not lead to secondary site comorbidities and body's own healing mechanism will regenerate the body of the mandible. It leads to Endogenous bone formation and helps in maintaining the vascular supply of the newly formed bone. Distraction procedure is Osteotomy with minimal periosteal stripping, latency period of 5–7 days before activation, distraction rate of 1 mm per day, twice a day distraction rhythm and consolidation until a cortical outline can be seen radiographically across the distraction gap. In Transport distraction bifocal or trifocals distraction can be done. This report describes a case of Ameloblastoma of mandible managed with resection and reconstruction using transport distraction osteogenesis.

Category: Student: E-Poster

Theme: Reconstructive Surgery

Reg. Num.: 469

Case Report of a Unilateral Cleft Palate Patient Treated with Iliac Crest Bone Grafting

Dr. Renu Jindal

Lady Hardinge Medical College

Abstract

This poster is a case report of a seventeen year-old patient with maxillary alveolar cleft that was treated with the application of iliac bone graft. Alveolar bone grafting for cleft patients is done to restore the function and structure of the maxillary arch. The bone graft also helps to close the oronasal fistula if existing. It is generally classified into primary and secondary alveolar bone grafting. Secondary ABG is usually performed in 9- to 11-year-old patients, in which cancellous bone is harvested from the iliac crest and grafted into the alveolar cleft before canine teeth eruption. The surgical timing of the patient in this case has surpassed the mixed dentition age. The primary objective for secondary alveolar bone grafting was to restore the structure of maxillary arch and improve aesthetics. The iliac crest, considered to be the “gold standard” of donor sites, was used because of its accessibility and the quantity of bone available, relative ease of bone harvest and the defect is both well covered and less prone to pathological fracture. The patient was subsequently evaluated for graft success and a follow up at 6 months was done. Based on the clinical and radiographic evaluation of the patient, the treatment for overall seemed success showing continuity of maxillary arch, optimal alar base reconstruction, elimination of fistula, better nasal alar cartilage support, getting a stable maxillary segment for orthodontic treatment.

Category: Student: E-Poster

Theme: Reconstructive Surgery

Reg. Num.: 473

Alloplastic TMJ Reconstruction

Dr. Mayank Agrawal

People's College of Dental Sciences and Research Centre

Abstract

Alloplastic temporomandibular joint replacement is an surgical modality in management of end stage temporomandibular joint disorders. This poster gives guidance to the surgeon about basic principles and fundamentals of Alloplastic TMJ reconstruction. Many TMJ disorder patients initially managed with non-surgical and conservative therapies and some patients with end stage pathology and severe physiologic dysfunction needs Total TMJ reconstruction. Alloplastic reconstruction provides biologic solution for treatment of

severe TMJ diseases. The use of these implants in case of ankylosis, degenerative joint disease, orthognathic deformities, and traumatic injuries has greatly contributed to success of these reconstructions. Alloplastic TMJ reconstruction requires careful surgical planning, surgical technique, and intelligent pre and post operative care. The Alloplastic temporomandibular joint replacement is a recently added surgical modality in management of end stage temporomandibular joint replacement. In addition to this with advent of STL models, the surgeon can perform mock surgery either manually or computer assisted and make the treatment outcome more predictive. As well as with the help of TMJ replacement and orthognathic surgery can provide a complete rehabilitation of patient in one surgical plan, alloplastic reconstruction includes the possibility of starting physiotherapy in the immediate postoperative period, and the fact that a graft donor site is not needed thus decreasing surgical duration and possible morbidity, in addition to allowing patients' functional anatomy to be effectively mimicked, as well as shorter hospitalization time.

Category: Student: E-Poster

Theme: Reconstructive Surgery

Reg. Num.: 499

Efficacy of Calcium Sulphate Dihydrate in Large Odontogenic Cystic Defects Following Enucleation: A Three-Dimensional Volumetric Analysis

Dr. Trupti Shendkar

D. Y. Patil Dental College

Abstract

Odontogenic cysts are one of the most common pathologies encountered by an Oral and Maxillofacial Surgeon. The treatment of large osseous bone defects created after enucleation of a cyst is an arduous challenge. Calcium Sulphate being the biocompatible substitute with rapid rate of resorption and its ability to induce osteogenesis has been used in the study for spontaneous bone regeneration of large cystic defects.

Objectives

The purpose of this study is to evaluate Bone formation in large Odontogenic Cystic Defects following Enucleation and Reconstruction with Bone Graft Substitute by 3-D radiographic and clinical evaluation.

Method

A total of 20 patients diagnosed with odontogenic cysts were randomly divided into two groups. Out of which the study group had undergone Enucleation with bone grafting and control group had undergone Enucleation without bone grafting. The patients were evaluated clinically and radiographically at 1st, 3rd and 6th month postoperatively.

Results

There was no bone formation observed at 1 month postoperative. There was a statistically significant higher bone defect reduction observed radiologically on OPG and CT scan in the study group than the control group at 3 month and 6 month postoperative.

Conclusion

Enucleation of large Odontogenic Cysts are rarely performed due to its potential complications such as fracture due to less bone support, delayed healing etc. Hence the utilization of a graft with a property of

inducing rapid bone formation should be taken into consideration. The uniqueness of calcium sulphate has led to a comparable rate of bone regeneration in the cystic defects, with minimal complications.

Category: Student: E-Poster

Theme: Reconstructive Surgery

Reg. Num.: 542

Assessment of Treatment Protocols and its Outcomes in Head And Neck Surgery Using Microvascular Reconstruction: Our Experience

Dr. Sanjana Wadewale

Sharad Pawar Dental College

Abstract

Background

The dominant contribution to head and neck reconstruction over the previous two decades has been microvascular free tissue transfer. With improvement in optical tools, it became easier to perform the vascular anastomoses that allowed free flap transfer. The success of microvascular surgery does not only depend on an adequate vascular suture, but also on a constellation of details that must be taken into account. The availability of a trained team, ergonomics of the surgeon, and the conscientious cleanliness of the surgical field. Particular attention to details is important for successful outcomes.

Aim

To present the methods and techniques used in the process of microvascular head and neck reconstruction in the SDM Craniofacial Unit.

Methods

A retrospective analysis of data of fifty patients who had undergone head and neck reconstructive surgeries over the past 5 years was done. The preoperative and intraoperative data was correlated with the postoperative outcomes.

Results

Pre-operatively recipient and donor vessels were selected for appropriate diameter and blood flow through Doppler. Most commonly used vessels included the facial artery followed by the superior thyroid artery. Internal jugular vein was preferred for venous anastomoses. Pricking of the arms was avoided in case of radial forearm free flap. Heparin was administered both intraoperatively and postoperatively to prevent congestion. Flap vitality was assessed through the maintenance of a prick chart, and fluid input and output were rigorously monitored.

Conclusion

This poster presents the protocol of the process of microvascular surgery techniques followed in the SDM Craniofacial unit.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.:** 543**Reconstruction of Orofacial Soft Tissues: Reconstruction of Identity: A Case Series***Dr. Apurva**SDM College of Dental Sciences and Hospital***Abstract****Background**

Since time immemorial, soft tissue injuries to the face have been documented. Injuries to the craniofacial region are common. Soft tissue repair following injury can be very challenging for reconstruction. The face owing to its prime position in the human body needs more attention. The potential loss of relationships between the functional and aesthetic subunits of the craniofacial region adds to the complexity.

Objective

The primary goal of management is the preservation of form and function with special consideration given to the functional structures. The rehabilitation is performed via surgical approaches through the existing lacerations, flaps or grafts.

Method

This is a review of eleven cases with soft tissue trauma of the face following which primary management was done after complete examination of the injury, debridement of necrotic tissue, preservation of viable tissue, tension-free closure and realignment of important aesthetic structures.

Result

Out of the eleven cases, 8 were RTAs, 2 assaults, 1 fall from a tractor. 2 cases had associated facial fractures where ORIF under GA was done through the existing laceration. Primary treatment of hard and soft tissue injuries of the face was done in all the patients which reduced the complication rate and flaps were also mobilized for wound closure.

Conclusion

It is an important and arduous task to repair and restore the function and aesthetics of the face as it is an important physical feature for complex social interactions in every-day life. Acute wounds of different etiologies offer a significant challenge to the reconstructive surgeons. Critical assessment of the nature and magnitude of the wound is of importance in relation to the ultimate surgical outcome.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.:** 554**Human Amniotic Membrane along with PRF in Maxillofacial defects***Dr. Anusha K. V.**Vokkaligara Sangha Dental College and Hospital***Abstract**

Preserved human amniotic membrane (HAM) has become an attractive biomaterial for all surgical disciplines. HAM has been used in the field of oral and maxillofacial surgery from 1969 onwards because of its immunological preference and its pain-reducing, antimicrobial, mechanical and side-dependent adhesive or anti-adhesive properties. The effects of HAM on dermal and mucosal re-epithelialization have been highlighted. Typically, HAM is applied after being banked in a glycerol-preserved, DMSO-preserved or freeze-dried and irradiated state. Whereas the use of HAM in flap surgery and in intra-oral and extra-oral lining is reported frequently, novel HAM applications in post-traumatic orbital surgery and temporomandibular joint surgery have been added since 2010. Tissue engineering with HAM is a fast-expanding field with a high variety of future options. Along with HAM PRF also induces growth factor which accelerate healing process.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.:** 556**A Hope for Ailing Microvascular Flaps: Is There Any Superior Technique?***Dr. Aditi Ava Rath**Institute of Dental Science, Bhubaneswar***Abstract**

For the oral and maxillofacial surgeon, the reconstruction of maxillofacial defects in hard and soft tissues is an ongoing challenge. While autologous grafts and vascularized free flaps are the current gold standard, they are not without complications at both the donor and reconstructed sites. Microvascular free tissue transfer is a routine procedure with high predictability and a low complication rate. Despite advances in surgical techniques and perioperative intensive care, the postoperative course after microvascular tissue transfer remains a challenge due to postoperative surgical and patient related complications. However, dealing with compromised flap perfusion remains a challenge and there is no consensus regarding the appropriate flap salvage protocol. The purpose of this review was to identify techniques with implications for flap salvage procedures and to assess their efficacy. This poster revisits the prevailing medicinal, surgical and biological modalities and modern diagnostic parameters to save a failing free microvascular flap and summarize the possible evidence based outcomes.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 585****Total Mandibular Joint Replacement: Surgical Guidelines***Dr. Faiza Farooqui**Rishiraj College of Dental Sciences and Research Centre, Bhopal***Abstract**

The anatomy, function and pathology of the temporomandibular joint is clearly the most complex of all the articulations in the human body. The history of alloplastic temporomandibular joint reconstruction has been characterized by multiple failures based on inappropriate design, lack of attention to biomechanical principles, and inattention to the exceptional wisdom of the orthopaedic experience. The current indications for alloplastic joint reconstruction include arthritic conditions, osteoarthritis, traumatic arthritis, rheumatoid arthritis, recurrent ankylosis with excessive heterotopic bone formation, revision procedures where other treatments have failed (e.g. alloplastic reconstruction, autogenous grafts), avascular necrosis, Multiply operated joints etc. There are also some contraindications like Active or chronic infection, patient conditions where there is insufficient quantity or quality of bone to support the components, systemic disease with increased susceptibility to infection, Patients with extensive perforations in the mandibular fossa and/or bony deficiencies in the articular eminence or zygomatic arch that would severely compromise support for the artificial fossa component etc. The biomet Microfixation total mandibular joint replacement system received FDA approval in Sept. 2005. In this poster presentation, surgical guidelines for total TMJ replacement will be discussed step wise along with some adverse events and associated warning signs.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 587****Widely Used Reconstructive Flaps After Oral submucous Fibrosis Fibrotomy***Dr. Amit Kumar Giri**Rishiraj College of Dental Sciences and Research Centre, Bhopal***Abstract**

Oral submucous fibrosis (OSMF) is a premalignant condition associated with restricted mouth opening and is poorly understood and unsatisfactorily treated disease. Surgical treatment is usually indicated in late and irreversible stage of the disease. Surgical treatment usually aims to relieve trismus, involves incising and releasing the fibrotic areas followed with Reconstructive Flap Surgery. Various flaps are used in day to day practice of OSMF. Adequate knowledge of

anatomy of donor site is very important, while planning for flap harvesting for soft tissue reconstruction. The widely used flaps for the reconstruction of the OSMF are Nasolabial Flap, Buccal Fat Pad and Temporalis Fascia Flap. This poster describes the detailed techniques of harvesting these flaps with various method and evidence based techniques. We will be discussing various advantages, disadvantages and complications of use of these techniques in OSMF.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 669****Transport Distraction Osteogenesis***Dr. Ujjaval Bhavsar**Narsinhbhai Patel Dental College and Hospital, Visnagar***Abstract**

Reconstruction is a vital component of any ablative maxillofacial procedures or trauma surgeries. Reconstruction should satisfy both esthetic and functional requirements of the patient. One such modality in maxillofacial reconstructive surgery is transport distraction osteogenesis (TDO). Transport distraction allows new tissue formation within a defect by moving a disk of bone until the disc docks the receiving host issue thus providing the advantage of both osteogenesis and histogenesis. The transport distraction device may be divided into three basic components: the reconstruction plate for stability, distractor component for mobilizing the transport disk on activation, and the screws for assembling and securing the device. Transport distraction is limited to reconstruction of relatively straight line defects and hence it has proven to be an extremely useful tool in reconstruction of mandibular defects. There have been cases where Transport distraction was used in maxillary reconstruction even though it can be challenging task. Transport Distraction has an added advantage of the reconstruction of associated soft tissue. Thus, transport distraction osteogenesis is a useful method that can be used in conjunction with minimal bone grafting or bone morphogenetic proteins to reconstruct continuity defects.

References

1. Spagnoli D. Mandible reconstruction with transport distraction osteogenesis. Atlas of the oral and maxillofacial surgery clinics of North America. 2008 Sep 1;16(2):287–307.
2. Neelakandan RS, Bhargava D. Transport distraction osteogenesis for maxillomandibular reconstruction: current concepts and applications. Journal of maxillofacial and oral surgery. 2012 Sep 1;11(3):291–9.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 695****Dorrance Flap: A Commonsensical Revive***Dr. Varsha Baskar**Meenakshi Ammal Dental College***Abstract****Introduction**

Oronasal fistula represents an abnormal epithelized tract between oral and nasal cavity thus impairing associated functions of deglutition and speech by nasal regurgitation of fluid and nasal speech respectively. The incidence rate of fistula that requires repair was found to be 8.1%.

Case Report

A 29 year old Keralite female with no known past medical history presented to the hospital with a change in her nasal tone very recently. Extensive clinical checkup showed an irregular defect which was well defined at the junction of hard and soft palate. There was a bluish hue extending from the opening to uvula posteriorly. The uvula was found bifid and rudimentary. Patient recognized the defect 9yrs back when she underwent steam inhalation following fever. At the time of admission patient was wearing an obturator which was placed for the same defect 7yrs back. The patient was advised OPG and CBCT and the provisional diagnosis of oronasal fistula was confirmed. The fistula tract was removed and Dorrance advancement flap was placed covering the entire lesion.

Conclusion

Principle of repair of oronasal fistula is apposition of well vascularized tissue without tension. Different techniques, starting from local flaps to free tissue transfer have been employed to repair oronasal fistula depending on its site, size and tissue available. In general, the recurrence rate of oronasal fistula is around 25%. With better technique and skill, the incidence as well as the recurrence rate can be minimized.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 708****Patient Specific Implant (PSI) as a Treatment Modality and Its Future***Dr. Anjali S.**PMS College of Dental Science and Research***Abstract**

Oral and maxillofacial defects are both functionally and esthetically debilitating for the patient. Reconstruction using Patient specific

implant (PSI) has proved itself in the perspective of treating and managing the individuals of Craniomaxillofacial trauma with precision and accuracy. Through PSI post traumatic craniofacial defects management can be done without using any kind of autogenous grafts thus reducing the risk of postoperative resorption and donor site morbidity. It is a new treatment methodology which helps to achieve excellent post operative results especially when esthetics are concerned. Its customized design, milling or fabrication using Titanium or its alloys followed by the surgical procedure to fit the implant in the desired location. In this poster, we have emphasized about the merits and demerits, method of fabrication and 2 cases where PSI was used in our department, in one case for the reconstruction of orbital floor fracture and in another case for reconstruction of Post traumatic skull vault defect.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 864****Use of Micro Vascular Free Flaps in Reconstruction of Head and Neck Cancer***Dr. Reading Well Kharmawlong**King Georg's Medical University Lucknow***Abstract**

Oral cancer is the sixth most common cancer worldwide, with a high prevalence in Asia. Tobacco, alcohol consumption remain the most dominant etiologic factors in oral cancer. Surgery is the most established mode of initial definitive treatment for majority of oral cancers. Oral squamous cell carcinoma is the most common oral malignancy, representing up to 90% of all malignant neoplasms of oral cavity. Need for reconstruction after tumour resection is of utmost importance functionally, aesthetically and psychologically. Free flap transfer is a procedure in which tissue and its blood supply (artery and vein) are surgically removed from one part of the body and transferred to another area of the body for reconstruction. Micro vascular surgery or microsurgery is a surgical technique for anastomosing the blood vessels during reconstructive surgery of body parts. Reconstructive surgery restores the functioning of the body parts by improving the circulation. Microsurgical free flaps are today considered state of the art in head and neck reconstruction after composite tumor resections. Free flaps provide superior functional, aesthetic restoration with less donor-site morbidity. Case reports featuring the reconstruction of oral cancer with free flaps such as radial forearm flap, anterolateral thigh flap and free fibula flap along with their aesthetic and functional results which were operated in SDM craniofacial unit will be discussed.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 880****Comparison of Nasolabial Flap versus Buccal Fat Pad as Interposition Material in Surgical Management of Oral Submucous Fibrosis: A Prospective Randomized Study***Dr. Sanjay V.**SDM College of Dental Sciences***Abstract**

Oral submucous fibrosis is a chronic progressive premalignant condition, characterized by gradually increasing fibrosis of sub mucosa resulting in trismus thereby, limiting mouth opening. Surgical treatment is the choice in patients with marked limitation in mouth opening. The Surgical management of this condition involves excision of the fibrotic bands and interpositional flap to retain the increased oral opening. Interpositional flap like Nasolabial flap, and other commonly used flaps like buccal fat pad etc. have been utilised with differing success rates. In the present study the aim is to evaluate the efficacy of nasolabial flap versus buccal fat pad as interpositional material in surgical management of oral submucous fibrosis.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 946****One Size Fits All: A New Universal Device for Mandibular Resection and Reconstruction Using Free Fibula in the Era of Patient Specific Solutions***Dr. Himanshu Gupta**Rama Dental College Hospital and Research Center***Abstract**

The Free Fibula Flap has become gold standard for reconstruction of mandible. Despite the progress made in microvascular reconstruction techniques, returning mandible to its original anatomical shape remains challenging. The L1 Mandible Recon Guide developed by KLS Martin is an innovative, reusable solution which can bypass the process of 3D measurements and speed up the process of precisely obtaining fibular graft in the required angular position. It also enables the use of specially coordinated color coded miniplates for the fixation of fibular graft thus completely obviating the need for pre op 3D planning and printing, and arduous Recon plate bending for osteosynthesis. This instrument also enables one/two/three segment resection of mandible coordinated with fibula. The resection guide and fibula guide are designed so that they work together to replicate the size, shape, and angulation accurately. This L1 Mandible Recon Guide could be used as an innovative, reusable, standard solution for

simplification of the challenging surgery and for optimal results in an efficient and precise way for mandibular reconstruction using a free fibula flap to achieve good functional and cosmetic outcomes.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 957****A Review of Various Interpositional Flaps Used in Reconstruction of Oral Submucous Fibrosis***Dr. Monika Singh**SCB Dental College and Hospital***Abstract****Background**

Oral submucous fibrosis (OSMF) is a kind of chronic, insidious disease, which is categorized into potentially malignant disorder. OSMF has been classified into various stages by different authors and the treatment varies as per the staging. The treatment is categorized into non-surgical and surgical modalities. The surgical management of this condition involves excision of the fibrotic bands and interpositional grafts to retain the increased oral opening. The various reconstructive methods are categorized into local flaps, regional flaps, and distant flaps. This poster aims to review different reconstructive options available.

Aims and Objective

To review different reconstructive options available which include a buccal fat pad with/without collagen, nasolabial flap, platysma flap, and abdominal fat pad.

Material and Method

An extensive search of world English literature was carried out from 2005 to 2020 on Medline-Pubmed, Cochrane, and Google Scholar. The search “surgical interventions in OSMF”, “flaps used in the treatment of OSMF” were used for retrieval of data.

Result

The review resulted in a total of 60 articles on the subject from the sources mentioned above. A total of 900 surgically treated cases were included in the analysis. The choice of procedure seems to be determined entirely by the preference of the operator/s.

Conclusion

There exist no definite protocols for the adoption of a particular treatment mode in OSMF. Adequate documentation and long-term follow-up are needed to proclaim the successes of various treatment modalities.

Keywords Oral submucous fibrosis, Surgical interventions

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 963****Techniques in Microvascular Anastomosis of Free Flaps in Reconstruction of Head and Neck Defects***Dr. Vartika Mathur**Sardar Patel Post Graduate Institute of Dental and Medical Sciences***Abstract**

Reconstruction of maxillofacial defects using microvascular free flaps is the most versatile method in present era with advent of technological advancement. The free flaps transfer allows restoration of functions and aesthetics in one stage. Successful outcome of vascularised free flap basically depends upon successful restoration of circulation in flap after anastomosis. The gold standard for achieving anastomosis in microvascular free tissue transfers is by hand-sewn techniques using nylon sutures. The mechanical anastomotic coupler devices have recently become effective alternative to hand-sewn anastomosis. Hand-sewn anastomosis is time consuming and technically challenging, including poor vessel edge eversion that exposes thrombotic material in the lumen and poor suture placement resulting in anastomotic leaks. Several alternates have emerged in the past four decades, including as couplers, vascular closure systems (staplers), Laser Assisted Vascular Anastomosis, and Fibrin sealant reinforced micro suturing. Out of these, the most promising appears to be the use of microvascular couplers, Approved by the Food and Drug Administration. The device can be used without fear of foreign body reaction or long-term sequelae. Microvascular couplers have patency rates as high as that seen with sutured anastomoses, while offering the advantage of decreased operating time and also able to anastomose small vessels.

References

1. Senthil Murugan, et al., Comparison of the efficacy of venous coupler and hand-sewn anastomosis in maxillofacial reconstruction using microvascular fibula free flaps: randomized controlled trial, *IntJOralMaxillofac*.
2. Ilie, et al., Sutureless Microvascular Anastomosis: Literature Review. *International Microsurgery Journal*.2019;3(2):1

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 966****Functional Reconstruction of Hemiglossectomy Defect with Microvascular Radial Forearm Free Flap: A Case Report***Dr. Dhurubatha**Government Dental College and Hospital, Kadapa***Abstract****Introduction**

Reconstruction means to restore form and function and totally rehabilitate the patient. Adequate reconstruction of defects that are consequences of glossectomy is of primary importance for achieving satisfactory functional results and improving quality of life. In glossectomy with 30–50% preserved original musculature, maintaining the mobility of the remaining tongue by a thin, pliable flap is preferred which can be achieved by radial forearm free flap (RFFF). Since its introduction RFFF has become a workhorse free flap in reconstruction. Reconstruction with RFFF is one stage procedure and it has become the standard in reconstruction surgery.

Case Presentation

A 61 year old woman presented with biopsy proven as squamous cell carcinoma of left lateral tongue. After all oncologic work-up, patient was scheduled with hemi-glossectomy, unilateral MRND type III and reconstruction with RFFF with anastomosing radial artery with facial artery and cephalic vein with internal jugular vein. The blood supply was abundant and the donor site was covered with split thickness skin graft. After 4 months follow up, the flap was found to be well adapted clinically and functionally with acceptable donor site morbidity. Patient is under clinical cancer surveillance.

Discussion

The RFFF provides thin, pliable skin to replace the tongue defect and add bulk to the tongue. It acts as spacer and allows tongue a certain degree of movement, a key in yielding a superior functional result.

References

1. Aurora V, Scott K, Thomas S Free-Flap Reconstruction of the Tongue *Semin Plast Surg* 2019;33:38–45.
2. Yuan Y, Zhang P, He W Comparison of Oral Function: Free Anterolateral Thigh Perforator Flaps Versus Vascularized Free Forearm Flap for Reconstruction in Patients Undergoing Glossectomy. *J Oral Maxillofac Surg* 1.e1–1.e6, 2016.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 969****AVM of Chin: A Rare Case Report***Dr. Geetu Jadon**Maharana Pratap College Of Dentistry and Research Center, Gwalior***Abstract****Background**

Vascular anomalies can be divided into two groups: vascular tumors and vascular malformations. Among vascular malformations, arteriovenous malformations (AVMs) are the lesions with direct communications between endothelial-lined artery/arteries and vein/veins bypassing the capillary bed. Haemorrhage and disfigurement are common reasons requiring intervention in AVMs involving the head and neck region.

Aim

We report a case of 36-year-old female with AVM of chin managed surgically in our institution.

Case Report

A 36-year-old female with ASA 1 status reported to department of oral and maxillofacial surgery with a chief complaint of swelling on the left chin area since 7 years. On clinical examination, palpation revealed bruits along the left chin region. After thorough clinical and radiographical investigation patient was provisionally diagnosed as arterio-venous malformation of left chin region. patient was planned for wide local excision under General anaesthesia, excised specimen was sent for histopathological examination which confirmed the provisional diagnosis of AVM. Patient was followed up postoperatively with no recurrence and associated complications.

Conclusion

The AVMs are fairly uncommon in the area of the head and neck. They can cause troubling hemodynamic manifestations such as venous obstruction, distal ischemia, and high-performance cardiac failure. Therefore, these cases must be diagnosed early and treated promptly. A clear clinical background with imaging usually delineates the lesion well and provides an opportunity to make a cautious intervention decision.

References

1. de Carvalho, M.F., de Oliveira, N.K., Duailibi, E., Homem, M.D.G.N. and Deboni, M.C., 2014. Extensive arteriovenous malformation in the face of a pediatric patient—Case report. *Revista Portuguesa de Estomatologia, Medicina Dentária e Cirurgia Maxilofacial*, 55(4), pp. 250–255.
2. Kolarkodi, S.H. and Alnafisah, A.M., 2020. Arteriovenous Malformation of the Lip: A Rare Case Report. *Cureus*, 12(7).

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 1001****Facial Transplantation***Dr. Harini Palanivelu, Dr. Sejal K. M.**FDS, MSRUAS, Bangalore***Abstract**

Oral and maxillofacial surgery has been involved in facial reconstructive surgery since its birth as a specialty. Whether it has been to correct a facial deformity secondary to a facial skeletal deficiency, trauma, infection, cancer related defect, temporomandibular joint (TMJ) disease or a congenital cleft lip/palate defect, the objective of the reconstructive surgeon has been to restore both the function and the aesthetic form of the face. To achieve this goal, all aspects of facial reconstruction, including normal speech and swallowing, correct perioral/periocular function, adequate nasal airflow, and dental rehabilitation, need to be addressed, all while recreating natural-appearing aesthetically appealing hard and soft tissue facial subunits. Recently, facial allotransplantation has allowed whole anatomical facial units to be replaced with the possibility of sensory recovery and reanimation being completed in a single procedure. At its fundamental level, facial transplantation involves standard microvascular techniques utilized daily for head/neck reconstruction, coupled with other modern techniques used in orthognathic surgery, TMJ surgery, maxillofacial trauma fixation, cosmetic facial surgery, and facial

nerve dissection (parotid/skull base surgery). The purpose of this poster is to discuss various aspects of facial transplantation from the view of an oral and maxillofacial surgeon.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 1023****Versatility of Myomucosal Flaps in Orofacial Reconstruction: A Case Series***Dr. Zoya Rafiq***Abstract**

Oral cavity reconstruction following resection of benign or malignant lesions poses a challenge for the head and neck oncologic surgery team. There are a variety of reconstruction options available that can afford good functional and cosmetic results. Free flaps are at the top of this ladder. Although microvascular free flaps have led to significant advances in head and neck reconstruction, medium-sized oral defects represent a reconstructive challenge for the surgeon because they are too large for primary closure and yet, too small to be properly filled using currently available free flaps. The main goals of reconstruction in the orofacial region include restoration of internal oral lining, preserve or improve the functioning of residual oral structures, replace the mucosa with tissues having similar features and obtain the best esthetic result possible. The use of local myomucosal flaps harvested from the cheek and lip area are one of the best means of achieving these objectives. In this case series, we have highlighted the use of various buccinator-based myomucosal flaps for medium-sized intraoral defects, and lip-mucosal advancement flaps for vermilion and commissure of the mouth reconstruction as viable options for reconstruction of moderately-sized defects in the orofacial region.

References

1. Ferrari S.: Myomucosal cheek flaps: applications in intraoral reconstruction using three different techniques. *J Oral Maxillofac Surg* 2011; 40.
2. Harris, L., Higgins, K., & Enepekides, D.: Local flap reconstruction of acquired lip defects. *Current Opinion in Otolaryngology & Head and Neck Surgery* 2021, 20(4).

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 1050****Case of Squamous Cell Carcinoma Managed with PMMC Flap and Delto-pectoralis Flap: A Case Report***Dr. Ramya K. Suryanarayan**Manipal College of Dental Sciences, Manipal*

Abstract**Introduction**

Clinical aspect of squamous cell carcinoma lesion was divided in three groups: ulcers, leukoerythroplakias and tumors. Location of the tumors included the following regions: floor of mouth, alveolar mucosa and gingiva, buccal mucosa. Hematoxylin and eosin stained histological slides were reviewed for diagnosis confirmation and for classification of the tumors as well-differentiated, moderately differentiated and poorly differentiated tumors.

Case

A patient came to the department of oral and maxillofacial surgery with a growth inside the mouth over right cheek region since 5 months. The intraoral examination revealed an intact permanent dentition in place, but reduced mouth opening and small bleeding spot over right buccal mucosa. There was no bleeding from the lesion but the lesion was firm and with irregular surface texture and indurated margins. The incisional biopsy revealed squamous cell carcinoma confirmed by radiological findings. Primary tumor was excised followed by reconstruction PMMC flap and deltopectoral flap.

Discussion

OSCC develops in the oral cavity and oropharynx and can occur due to many etiological factors. The radiological profile of our case was consistent with the findings. The incisional biopsy helped us narrow down the diagnosis to SCC. Surgery was preferred over conservative treatment because of the involvement of regional lymph nodes.

Conclusion

Oral squamous cell carcinoma (OSCC) is the most common oral malignancy, representing up to 80–90% of all malignant neoplasms of the oral cavity. It has a high prevalence in certain parts of the world, and is associated with a high mortality rate.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 1070****Poorly Managed Left Angle Fracture of Mandible: A Case Report***Dr. Nimish Situt, Dr. Ramakrishna Shenoi***Abstract**

Nonunion of mandible following open reduction and internal fixation is an uncommon complication. Herewith we discuss a case poorly managed Angle fracture of mandible in a 35 years old female patient. She had a history of assault before 6 years and was conservatively managed. Reported with malunited fracture after 1 year and she was treated with refracture and fixation with load sharing miniplate. After 2 years Patient had discomfort on the operated site and was diagnosed with Implant fracture, patient was again retreated with load bearing reconstruction plate. Now, patient reported to our department with Non-union of left angle of mandible with implant fracture after approximately 3½ years. Patient was diagnosed as non-union and managed with Iliac bone graft reconstruction. In this case report we discuss about the importance of biomechanics in management of mandible fracture and the importance of achieving muscle balance within the muscles of mastication.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 1083****Anterior Based Tongue Flap for the Closure of Posterior Palatal Defect***Dr. Thennarasu A. R.**Adhiparasakthi Dental College***Abstract****Abstract****Aim**

Through this E poster, we attempt to present the use of anterior based tongue flap in the closure of a posterior palatal defect.

Introduction

Palatal defects following congenital anomalies, traumatic injuries, benign and malignant pathologies frequently require resection and reconstruction. Reconstruction of these defects is challenging and complex due to the amount of tissue left for primary closure after excision, compromised vasculature in the palate and limited pedicled flaps around the lesion. Tongue flap because of its flexibility, good blood supply and position it can be considered as the best among other flaps for reconstruction of oral and palatal defects.

Background

The tongue flap was first described by Eisenberg for intraoral defects. Later on, Lexer used a lateral based tongue flap in 1909 for reconstruction of defects of retro molar trigon and tonsillar area. Guerrero-Santos J, Altamirano JT popularized this technique. The vascularity of the tongue is through the lingual artery that gives off four branches supra hyoid, dorsal lingual, deep lingual and sublingual artery along with this there is extensive anastomotic network with the contralateral side. Clinical application of tongue flap includes reconstruction of oral defects, closure of oroantral fistula, alveolar clefts, oral sub mucous fibrosis, upper and lower lip reconstruction and hard and soft palate defects. Tongue flap has been a work horse for difficult palatal fistula with shortage of tissue and the success rate of the tongue flap has been reported varying from 85 to 95.5%.

Conclusion

Considering the versatility of the tongue flap, it proves to be an ideal flap, especially for palatal defects.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 1202****Nerve Grafting in Facial Palsy***Dr. SIMARJIT SINGH**Sri Guru Ram Das Institute of Dental Sciences and Research*

Abstract

Facial paralysis can be devastating with a profoundly negative impact on function, quality of life, and social interaction. The causes of facial paralysis include congenital abnormalities, infections, inflammatory processes, neoplasms, iatrogenic injury, and trauma. The facial nerve and associated musculature are integral in eye closure, proper tearing mechanism, support of nasal breathing, formation of a smile, oral phase of eating, speech production, and emotional conveyance. The goal of facial re-animation is to restore these facial functions, facial symmetry, social interaction, and quality of life. Non-surgical treatments usually include antiviral drugs, Vitamin B drugs, corticosteroids, physiotherapy, acupuncture treatment and others. Although various surgical treatments in forms of facial reanimation, including nerve transfers, static and dynamic procedures are there. This poster will focus on the latest literature with respect to nerve transfers in facial paralysis. More in-depth discussion will cover direct facial nerve repair techniques, cross facial nerve graft technique, hypoglossal nerve transfer, and masseteric nerve transfer.

Reference

1. Jandali D, Revenaugh PC. Facial reanimation: an update on nerve transfers in facial paralysis. *Curr Opin Otolaryngol Head Neck Surg.* 2019 Aug;27(4):231–236. <https://doi.org/10.1097/MOO.0000000000000543> PMID: 31169528.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 1294****Trans Oral Allogenic Bone Grafting for Reconstruction of Large Mandibular Defects Caused Due to Tumors***Dr. Parva Apurvabhai Patel**Faculty of Dental Science, Dharamsinh Desai University, Nadiad***Abstract**

Reconstruction of hard tissue continuity defects caused by ablative tumour surgery has been traditionally reconstructed with autogenous bone grafts or microvascular free flaps. Reconstruction can be achieved by a variety of techniques and materials for bone grafting, including autografts, allografts, and alloplastic grafts [1]. The choice of technique depends on different factors, including the types and degrees of bone loss, surgical prosthetic planning, and the general condition of the patient. An autogenous bone graft is considered the ideal grafting material, with the highest success rate due to its osteogenic and osteoinductive capacity. Although it does not trigger an immune response, it is associated with donor site morbidity, poor efficacy for large bone defects, and prolonged recovery time [2]. One promising material that has shown successful bone regeneration in maxillofacial defects is recombinant human bone morphogenetic protein 2 (rhBMP-2), which can stimulate angiogenesis and the migration, proliferation, and differentiation of mesenchymal stem cells into bone-forming cells. rhBMP-2 when used in combination with an allograft, produce bone similar to an autogenous graft and can even be used in large vertical bone augmentation without the need for harvesting a donor bone. This poster highlights the procedure for

harvesting the bone graft for reconstruction of large mandibular defects on the mandible [1].

References

1. James C. Melville, D.D.S., Nader N. Nassari, DDS, Issa A. Hanna, DDS, Jonathan W. Shum, DDS, MD, Mark E. Wong, DDS, Simon Young, DDS, MD, PhD. Immediate Trans-oral Allogeneic bone grafting for large mandibular defects. Less morbidity, more bone. A paradigm in benign tumor mandibular reconstruction?
2. Kamel Alraei, Jameel Shraqawi, and Khawlah Alarusi. Application of Recombinant Human BMP-2 with Bone Marrow Aspirate Concentrate and Platelet-Rich Fibrin in Titanium Mesh for Vertical Maxillary Defect Reconstruction prior to Implant Placement.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 1295****Nasolabial Flap in the Management of Oral Submucous Fibrosis***Dr. Aparajita Adurti**Jaipur Dental College, Rajasthan***Abstract****Aim**

To evaluate the efficacy of nasolabial flap in the surgical management of OSMF.

Introduction

Oral submucous fibrosis (OSMF) is a chronic insidious disease affecting any part of the oral cavity and sometimes the pharynx. It is a collagen-related disorder predominantly associated with tobacco/areca nut chewing habit and characterized by progressive hyalinization of the submucosa. It is the condition which carries a high risk of malignant transformation, that is, 3–7.6%. It is an insidious chronic disease, causing trismus due to fibroelastic changes by causing both increased collagen production and decreased collagen breakdown, accompanied by epithelial atrophy. The surgical procedures for the management of advanced OSMF include excision of fibrous bands with or without coverage of the surgically created defect. Surgical treatment is warranted in patients with marked limitation to mouth opening, where fibrous bands are excised, and the surgical defects reconstructed utilizing various grafts such as split thickness skin graft, tongue flap, nasolabial flap, palatal island flap, and buccal fat pad graft. Nasolabial region has an excellent dual blood supply, which assures the successful take-up of the flap.

Conclusion

The nasolabial flap is a versatile flap, which can be successfully used in the reconstruction of defects created after the release of fibrotic bands in OSMF. Major advantage is the ease of elevation, proximity to the defect, suitable size for coverage of defect, minimal swallowing and speech difficulties, and a relatively cosmetic result as scar is in natural crease.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 1324****The Profunda Artery Perforator Flap: A Versatile Option for Head and Neck Reconstruction***Dr. Lima L.**A.J. Institute of Dental Sciences***Abstract**

Throughout evolution of microvascular reconstruction, several workhorse alternative flaps have emerged in the arena of head and neck reconstruction, a few elected ones being the anterolateral thigh and the radial forearm flaps for soft-tissue reconstruction and the free fibula flap for vascularized bony reconstruction. More recently, refinements in microsurgical technique have created a paradigm shift from a focus on flap survival to optimizing a vast outcome following microvascular free tissue transfer. As a result, perforator flaps using a variety of different donor sites have been studied to achieve the best possible functional and aesthetic outcome and minimize donor-site morbidity. One recent incorporation that could serve as a viable option for head and neck reconstruction is the profunda artery perforator flap. First described in 2001 as an adductor flap using posteromedial thigh skin based on profunda femoris perforators, the flap has gained popularity as an alternative for autologous breast reconstruction. Numerous radiographic, cadaveric, and clinical studies have demonstrated that this flap has consistent, reliable vascular anatomy with sizable vessel caliber and adequate pedicle length. Given the plethora of perforators surrounding the flap, it can be designed in different orientations, and harvested as a true fasciocutaneous perforator flap, a myocutaneous flap, or a chimeric flap. This flexibility makes the flap an attractive option for soft-tissue reconstruction of complex head and neck defects. The present E-poster aims to describe clinically relevant flap anatomy and assess the suitability of the flap in microvascular head and neck reconstruction.

Category: Student: E-Poster**Theme: Reconstructive Surgery****Reg. Num.: 1360****Robotic Surgery in Oral and Maxillofacial Surgery: An Innovative Approach***Dr. Akshit Batra**Yenepoya Dental College and Hospital, Mangalore***Abstract**

Over last 2 decades robotic assisted surgery has revolutionized minimally invasive surgery in oral and maxillofacial surgery. Robotic surgery in maxillofacial surgery has wider advantages compared to

open surgery like surgery can be performed with less blood loss, fewer complications, quick postoperative functional recovery and low surgical morbidity and better cosmetic results. Robotic assisted surgery has been used in multiple oral surgical procedures. The clinical applications of robotic surgery are in head and neck neoplasms, cleft lip and palate, maxillofacial fractures, reconstructive surgeries. There are few limitations like lack of tactile perception and proprioception, lack of haptic feedback, costly and long duration. This poster reviews the history, current indications, clinical applications, limitations, benefits of robot assisted surgery in oral and maxillofacial surgery.

References

1. Kumar V, Chaudhry K, Gour S, Aeran H, Agarwal A. Advent of surgical navigation in oral and maxillofacial surgery and application of different navigational systems in various surgical procedures: a review. *J Interdiscipl Med Dent Sci.* 2018;6(225):2.
2. Ghasemi S. Innovative approaches in emerging practices in OMFS in veterinary patients. *Advances in Oral and Maxillofacial Surgery.* 2021 May 15:100102.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 199****Engines of Creation: The Coming Era of Nanotechnology***Dr. Sowmya T.**H.K.E'S S. Nijakingappa Institute of Dental Sciences and Research Center, Kalaburgi***Abstract**

Nano-technology is defined as research and technology development at the atomic, molecular, or macromolecular levels; in the scale of approximately 1–100 nm range; to provide a fundamental understanding of phenomena and materials at the nanoscale; and to create and use structures, devices, and systems, which have novel properties and functions because of their small and/or intermediate size. Nano-technology has a multi-faceted influence on everyday life from Engineered Food to Medical care. Nano-technology is found to be beneficial in tissue regeneration, wound healing, angiogenesis, remineralisation, nerve regeneration, antitumor, and antibacterial regulation. Nanomaterials including Polymers, Micelles, Dendrimers, Liposomes, Nano capsules, Nanoparticles and Nanostructured scaffolds are commonly employed. Nanomaterials provide substantial improvements in the prevention and treatment of Oral and Maxillofacial diseases. The presentation aims at an introduction into the world of nanomaterials applied to Cranio-facial tissue regeneration and disease treatment, focusing primarily on the use of nanomaterials in enhancing the quality of healthcare rendered. The advances and achievements in biomaterials have enabled precision medical programs to provide personalized, safe, and effective care. Hazard of nanomaterials in craniofacial reconstruction and regeneration should be taken into consideration. A major obstacle in developing the nanomedicine is the cost of equipment or therapy being developed. Although the nuances of nanomaterials still needs further authentic studies to prove its application in maxillofacial practice.

References

1. Ding Q, Cui J, Shen H, He C, Wang X, Shen S et al. Advances of nanomaterial applications in oral and maxillofacial tissue regeneration and disease treatment. *WIREs Nanomedicine and Nanobiotechnology*. 2020;13(2):1–38.
2. Shakib K, Tan A, Soskic V, Seifalian AM. Regenerative nanotechnology in oral and maxillofacial surgery. *British Journal of Oral and Maxillofacial Surgery*. 2014 Dec 1;52(10):884–93.

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 224

Robotic Surgical System: Clinical Applications and Future Perspective in Maxillofacial Surgery

Dr. Akshay M. V.

MES Dental College

Abstract

Introduction

The first robotic surgery system PUMA 5606 was introduced in 1980s to orient a needle for brain biopsy. Since then, three generations of robotic surgeries are introduced G1-CMI's AESOP, G2-Telerobotic Zeus and G3-da Vinci surgical system. For decades, robots and surgery have been developing along two independent paths and the potential capabilities of robotics in minimal invasive surgery (MIS) is well recognized. Maxillofacial surgeries have conventionally been performed with large incision either via trans-mandibular or a transpharyngeal approach, because of the complicated anatomy and limited surgical space. These procedures typically result in significant surgical morbidity, speech dysfunction and dyspepsia from the dissection of large amounts of normal tissue. MIS technique allows surgeons to access tissue through a few small incisions instead of a large incision. The focus of these procedures is now on preserving function, reducing postoperative morbidity and improving quality of life.

Method

Transoral robotic surgery (TORS) was proposed and applied clinically in 2009 (FDA approval) for selected T1 and T2 malignant tumor which has widened new vistas in surgery. DA VINCI system which includes: Surgeon's console, Robotic cart, 3 Arms with 7-degree freedom, Stereoscopic camera, Retractors (FK, DINGMAN) i.e. wristed movement + digital dexterity + 3D view.

Conclusion

Surgical telemanipulation with computer assistance allows a digital interaction with the anatomic target is a revolution, beginning of a new era of integrating robotic technologies with surgical instrumentation. However definitive recommendation for the application of robotic surgical system in the treatment of head and neck will require more well designed and technique modification, cost, awareness in medical education, model acceptance and trained a team.

Reference

1. Kwoh: A robot with improved positioning. *Trans biomedeng* 1988;32:153–160.

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 272

3D Printing and Virtual Surgical Planning Technology in Oral and Maxillofacial Surgery

Dr. Subhajit Mitra

Teerthakar Mahaveer Dental College and Research Center

Abstract

Over the past decade, the utilization and implementation of various technologies has been increased in oral and maxillofacial surgery. Amongst, virtual surgical planning and 3D printing have emerged as reliable tools in various procedures such as Trauma, Orthognathic surgeries, implant surgeries and reconstructive surgeries. In maxillofacial surgery, additive 3D printing technologies are currently used to create personalized prostheses, surgical guides, dental and jaw models for training and preoperative planning, and patient-specific implants. Receiving data, processing it in a computer program, 3D printing, and post-processing are all steps in manufacturing of above items. This E poster will provide a summary of 3D printing and discusses the current applications of this technology in oral and maxillofacial surgery, including the production of surgical planning models, training tools, cutting guides and personalized implants and demonstrate that 3D technology may provide powerful tool used for reconstruction of various OMF defects, enabling satisfactory clinical results in the suitable cases.

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 279

Virtually Perfect? Telesemiology: An Opportunity or Future of Maxillofacial Surgery

Dr. Dakshesh Thumar

Sudha Rustagi College of Dental Sciences and Research Institute

Abstract

Worldwide pandemic caused by the the COVID-19 outbreak has led to an unprecedented burden on healthcare system, posing new challenges in terms of reshaping healthcare services. Lockdown restrictions also have decreased overall mobility and physical contact of doctors with their patients thereby challenging the traditional concept of clinical examination. Telemedicine has provided a valuable solution for such issues allowing the evaluation of Oral and Maxillofacial surgery patients through technological interfaces, platforms, applications restricting physical contacts to cases with high clinical and surgical priority, intercepting suspects and maintaining contact with discharged patients. A model of reshaped

organization with telemedicine central to the continuity of assistance, while at the same time minimizing the risk of exposure for both doctor and patient is studied. A model is created in which out patients consultation offices are translated into virtual room environment. High number of patient evaluated through telemedicine during COVID period has improved one's ability to define signs and symptoms of disease using informatic tools, thus allowing the introduction of the concept of "Telesemiology". Telemedicine if well implemented in robust organization models can provide a scalable standard solution to overcome problems of overcrowded outpatient areas, discontinuity of care and exposure of operators to infectious risk.

Keywords COVID 19, Telemedicine, Telesemiology, Organization model

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 287

Complications of Maxillofacial Distraction Osteogenesis: A New Classification System

Dr. Mahendra Mohan Katiyar

Index Institute of Dental Sciences

Abstract

Introduction

Distraction osteogenesis (DO) is a biological process of a new bone formation that occurs between the bone segments that are separated by gradual incremental traction. Though DO is associated with many advantages, there are many complications associated with it. None of the available classification system give a complete review on the complications.

Aims and Objectives

To present a new comprehensive classification of the complications of DO which can be applied for avoiding complications in various phases of DO, Decision making in their management and for future studies related to maxillofacial DO.

Methods

Systematically existing classification systems were reviewed; the disadvantages of the existing systems were studied and the new classification system was proposed. Government of India has granted this classification a copyright with registration no. L-96443/2020.

Results

Complications of DO were divided into 4 sections as per the phases of treatment. The complications were further subdivided into acute and long term.

Discussion

Out of several complications given in literature till date the common shortcomings were that the complications were not discussed based on phases of treatment. With our new classification system, we have made an effort to circumvent the common disadvantages of the already available classification systems.

Conclusion

The new classification system can be applied to avoid complications in different phases of maxillofacial DO, decision making in their management and or the future studies by the researchers and surgeons worldwide for various purposes.

References

1. Mofid MM, Manson PN, Robertson BC, et al. Craniofacial distraction osteogenesis: A review of 3278 cases. *Plast Reconstr Surg.* 2001;108(5):1103–1117
2. Norholt SE, Jensen J, Schou S et al. Complications after mandibular distraction osteogenesis: a retrospective study of 131 patients. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2011;111(4): 420–7.

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 329

Computer Assisted Surgery: A Revolutionary approach in Maxillofacial Surgery

Dr. Suleka Ranganath

Government Dental College, Mumbai

Abstract

Background

Computer-aided surgery is improving the outcomes in maxillofacial surgery, particularly in complex cases. Incorporating computer technologies like computed tomography scan, magnetic resonance imaging, ultrasound to aid in planning and executing challenging repairs can improve precision and clinical results. Specifically, 3D virtual models from CT image can be manipulated in modeling software to perform and visualize repairs prior to operation. These models are then used with intraoperative navigation systems, thus paving the way for more accurate surgical repairs.

Aim and Objective

To review several recent articles for exploring the clinical outcomes using computer-aided surgery, investigate the precision of intraoperative navigation systems and examine the impact of facial asymmetry on planning and reconstruction.

Materials and Method

An extensive web search was done using keywords like computer assisted surgery, intraoperative navigation, maxillofacial 3D reconstruction, patient specific implants on all medline (Pubmed), cochrane, scopus and google scholar electronic resources.

Results

After reviewing the literatures, it was found that the use of computer-assisted technique in maxillofacial surgery provides the benefit of optimal functional and aesthetic results, patient satisfaction, precise translation of the treatment plan with intraoperative manipulation.

Conclusion

Computer-aided surgery clearly has the potential to have great impact on the management of complex maxillofacial surgeries. Preoperative planning software allows for accurate creation of virtual models that can be used by intraoperative navigation systems to guide reconstruction to within millimeters of the optimal positioning.

Keywords Computer assisted surgery, Patient specific implants

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 392****A Multimodal Approach for the Treatment of OSMF: A Split-Mouth Case Study***Dr. Manthan Kumar Das**Sardar Patel Post Graduate Institute of Dental and Medical Sciences***Abstract**

Oral submucous fibrosis is “an insidious, chronic disease affecting any part of the oral cavity and sometimes the pharynx. Although occasionally preceded by and/or associated with vesicle formation, it is always associated with juxta-epithelial inflammatory reaction followed by fibro-elastic changes in the lamina propria with epithelial atrophy leading to stiffness of the oral mucosa causing trismus and difficulty in eating.” Arecoline, an alkaloid found in the areca nut, is the main causative factor of OSMF. In the following study, we have employed two treatment modalities, namely:

- a) Diode Laser Biostimulation.
- b) Combination of placenta extract and hyaluronidase.

Lasers are rapidly evolving as potent surgical aids. Endre Mester, the Father of Photobiomodulation, pioneered the usage of low-intensity laser radiation (LILR) in 1967. Configurations like pulse width, duration of exposure, power density and repetition rate are optimized to avoid under or overexposure of the surgical site. Photobiomodulation is estimated to activate the cytochromes and porphyrins present in the mitochondria, propagating the increase of ATP and proliferating DNA synthesis. Placenta extract boasts of biogenic stimulation of tissues based on its ability to resist pathogenic onslaughts, revitalizing the affected areas and boosting metabolic activity. Hyaluronidase breaks down hyaluronic acid present in the connective tissues lowering the viscosity of intracellular cement substances. Therapy involving the aforementioned has resulted in a considerable decline of ulceration, burning sensation of the oral mucosa and loosening of the fibrotic bands in patients.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 467****Minimally Invasive Techniques For Facial Rejuvenation***Dr. Arunima Gupta**Divya Jyoti College of Dental Sciences and Research***Abstract****Background**

Face is a relevant part of the body, for which identification of tools, methods and techniques in management of the soft tissues will help maxillofacial surgeons in achieving esthetics and function in facial soft tissue.

Aims and Objectives

To restore the esthetics of the face with minimal scarring and uneventful healing.

Methods

Surgical management of soft tissue is carried out by novel techniques including modern ultrasonic cutting devices, plasma beam, water jet and rapid ionization evaporative mass spectroscopy cutting devices which is followed by closure with vacuum assisted closure, multi-functional/smart sutures and topical drug delivery by lasers for esthetically pleasing facial outcome.

Results

Improved technologies increase in surgical precision, reduce/eliminate thermal injury of adjacent tissues, reduce blood loss, and the newer wound closure techniques help in monitoring and support wound closure.

Discussion

Minimally invasive advanced techniques for surgical management of soft tissue brings about good esthetic and functional outcome.

Conclusion

It emphasizes closure and healing of wounds by upholding tissue together to facilitate healing process and enhancement of facial esthetics.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 535****PEEK Implant: A New Innovation to Facial Aesthetic***Dr. Mounika M.**VS Dental College and Hospital***Abstract**

PEEK (Polyetheretherketone) are being tremendously used in the field of maxillofacial reconstruction where facial aesthetics are of great concern. They came out to be a reliable material for facial and skeleton reshaping and camouflage. Due to their property to adapt completely to the patients anatomy, PEEK implants have an important role in facial augmentation that corrects any existing asymmetry of the face. The existence of this implants came out to be a solution to the problems related to the older biomaterials. Based on the pre-operative CT scans, the bone anchored PEEK implants are customised with the help of 3D printers previewing the size, shape and location of the prostheses that allow desired outcomes. Using these implants, satisfactory results are seen in improving the facial contour with less chances of infection.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.:** 539**Piezosurgery Vs Bur in Impacted Mandibular Third Molar Surgery:? Evaluation of Postoperative Sequelae?***Dr. Shine Kamal Kaur**Dasmesh Institute of Research and Dental Sciences, Faridkot***Abstract****Aim**

To compare the operative outcomes of ostectomy using piezosurgery and conventional bur mounted on a rotary hand piece used for surgical removal of impacted mandibular third molar?

Objective

To compare and evaluate post operative pain Edema, Trismus, Nerve Injury, Soft tissue injuries and operative Time required in both methods.

Materials and Methods

Prospective, randomized, double-blind, crossover study design is implemented. A sample of 60 individuals were selected between the age group of 21–35 years. Inclusion and Exclusion methods with different factors are evaluated.?

Result

The result is based on 6 different factors and with the outcome determined Piezosurgery is considered to be the better method than the Bur which is further described in the discussion.?

Conclusion

Piezosurgery is a novel and superior alternative in surgical removal of third molars as it is more efficient in terms of pain, swelling, trismus, and soft tissue injuries. However, it is more time consuming, but the operative time is reduced after a definite, albeit small learning curve.?

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.:** 545**Sharad Pawar Dental College***Dr. Sneha Patil**Virtual Surgical Planning and Surgery.***Abstract**

There is always a challenge in achieving perfect aesthetic outcomes in maxillofacial surgery due to complex anatomy of the craniofacial skeleton. Traditionally, reconstructive surgery has relied on the surgeon's subjective assessment of form and aesthetics and occlusal splints and templates were used in guiding the procedure. Since more precision is needed in the field of TMJ and Orthognathic surgery and the advent of computer assisted surgery has simplified the complex

procedures such as TMJ replacement with simultaneous orthognathic surgery, a single stage procedure is now made feasible. It is also used in the fields of cardiology, neurosurgery, maxillofacial trauma, pathology and reconstruction. The primary goal of using VSP and surgical guides is to achieve more predictable and precise postoperative results. Computer Assisted surgery includes preoperative planning through virtual surgery, fabrication of cutting guides and bone models using stereolithography techniques, and surgical navigation systems to aid in the placement of implants and to guide bone cuts. In this poster my experience in the use of surgical guides, splints and VSP in Total joint reconstruction and orthognathic surgery is exhibited.

Keywords VSP and Surgical Guides in Orthognathic and TJR**Category: Student: E-Poster****Theme: Research/New Technologies****Reg. Num.:** 550**The Minimally Invasive Endoscopic Technologies in Oral and Maxillofacial Surgeries***Dr. S. Preethi**Rajah Muthiah Dental College***Abstract**

Oral and maxillofacial surgery is entering a new era. Surgeons can use the latest technological advances in equipment in an attempt to improve patient outcomes. From an educational standpoint, surgical anatomy and various other principles can easily be taught to trainees with the assistance of the endoscope. The operating surgeon can visualize an area via the endoscope, and instruct regarding the surgical maneuvers on the monitor, without obstructions to view. Endoscopically assisted surgery is gaining popularity and is becoming a tool frequently used by surgeons to assist in and simplify some of the more difficult techniques that often require more extensive surgical exposure for visualization. Endoscopic repair of facial fractures is a new and evolving technique that offers the potential for reduced patient morbidity and operating time, as well as quicker patient recovery. Current applications include the management of orbital blow-out, frontal sinus, zygomatic arch, and subcondylar fractures. It should be emphasized that endoscopy augments, rather than replaces, the 'time tested' principles of adequate skeletal exposure, accurate fracture reduction, and appropriate internal fixation. Endoscopic repair of facial fractures is a new and evolving technique that offers the potential for reduced patient morbidity and operating time, as well as quicker patient recovery.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 564****Patient Specific Cast Metal 3D Printed Surgical Guides: Simple Alternative to Titanium Guides***Dr. Ananya Bej**Institute of Dental Sciences***Abstract****Introduction**

Rapid prototyping is a valuable addition to the field of OMFS not only for diagnosis, surgical planning but also for fabrication of surgical guides. Patient specific 3D printed surgical guides allow surgeons to transfer virtual surgical plan to operating table minimizing errors and maximizing accuracy. Usually, titanium is the material of choice but materials like ABS, PLA, resins, medical grade metals like stainless steel, Co–Cr alloys can be used. They are inexpensive, can be fabricated using hybrid approach where the guide is 3D printed in castable resin, then cast metal is used to fabricate guides using investment casting.

Material and Methods

10 patients requiring different surgical procedures like maxillofacial trauma, orthognathic surgeries, cleft osteotomies were selected, patient specific 3D printed guides were fabricated using hybrid method. Fit of guide was assessed photographically, accuracy of surgery assessed overlapping pre-post CT scans.

Results

The fit of guide was accurate in all cases, although it was bulky and couldn't fit into surgical site easily in case of genioplasty.

Discussion

Titanium has been material of choice for several decades as its rigid and biocompatible, but is expensive and difficult to fabricate. Stainless steel and cobalt-chromium alloy can be used as they provide same strength, high corrosion resistance, ease of fabrication and are economical. Being patient specific, it accurately fits anatomical structure to be reduced/resected aiding predictable aesthetic and functional outcome of surgery.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 596****Walking Through Covid-19: A Resident's Perspective***Dr. Aaron Karthik, Dr. Chitra Chakravarthy**Navodaya Dental College and Hospital***Abstract****Introduction**

The COVID-19 pandemic affected basic health care in maxillofacial surgery due to the shift in resources and the change in patient disorders treated during the pandemic. It has burdened health care systems, interrupted our lives in every aspect, including medical and surgical training programs, and disrupting the economy of societies across the world.

Aims

1. To understand the impact on and changes made to OMFS residency training and education.
2. To characterize the subjective experience of residents during the pandemic.

Materials and Methods

A sample size of 200 residents (I/II/III year MDS) were included in the survey. We designed and implemented a cross-sectional study that includes a 20-question survey designed to accomplish the 5 specific aims of the study. An electronic survey host (Google Forms) was used to generate a web-based platform for the responses, and the responses were retrieved from the online, electronic survey portal. The responses were compiled, collated, and transferred to the Statistical Analysis Software package for analysis using counts, percentages, cross-tabulations, and frequency reporting of the survey results.

Results

The results are awaited and shall be displayed in the electronic poster.

Conclusion

COVID 19 brought about significant changes in the practice of Oral and Maxillofacial Surgery effecting dramatic concern for the forthcoming surgeons. The future entails remedial efforts towards the same.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 624****Evaluation of Masseter Muscle Activity Using Electromyography Before and After Surgical Release of Fibrous Bands in Patients with Oral Submucous Fibrosis: A prospective Study***Dr. Sanskriti Gandhi, Dr. Ria Mukharjee**MGM Dental College and Hospital***Abstract****Background**

Surgical treatment remains the method of choice for the severe and irreversible stages of OSMF, which usually includes surgical release of fibrous bands, coronoidotomy and reconstruction with suitable flap. Electromyography is one of the most reliable method for recording electrical activity of skeletal muscles. The change in the electromyographic activity of masseter muscle will aid in determining the efficacy of surgical procedure in patients with severe oral submucous fibrosis.

Aim

To evaluate the masseter muscle activity using electromyography before and after surgical release of fibrous bands in patients with Oral Submucous Fibrosis (OSMF).

Methodology

A total of 10 subjects were included in the study which are classified under Group 4a of Classification given by Aziz in 2008 for OSMF. The subjects underwent preoperative Electromyography (EMG) which were further compared with follow up values of the EMG obtained after surgical release of fibrous bands in patients with OSMF.

Results

The preoperative and follow up EMG values were compared and were represented in number and mean \pm standard deviation. Students paired t test was used to analyse the data to find out various results based on the objectives. Statistically significant decrease in left and right masseter muscle activity on EMG was observed over 3 months of follow up ($p = 0.0001$). **Conclusion**

Electromyography serves as a useful guide in assessing effect of surgical release of fibrous bands on muscular activity in patients with oral submucous fibrosis.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 640****Versatility of Endoscope: A Boon in Oral and Maxillofacial Surgery***Dr. Krutarth Shirish Kshirsagar**Sharad Pawar Dental College and Hospital, Sawangi (M)***Abstract**

Minimally invasive techniques have an increasing role in all surgical fields because they result in decreased morbidity rates and better aesthetic outcomes. Specifically for the oral and maxillofacial area, these better aesthetic outcomes are of greater importance. Endoscopy in health sciences basically means looking into a hollow cavity or organ for medical problems using an endoscope. In the present era, endoscopy has contributed much to the advancements in maxillofacial surgery and its application is defined by many authors in literature for maxillofacial trauma, endoscopy for management of different intra-oral and oro-nasal pathology, diagnosis and treatment of internal derangements of TMJ, salivary gland disorders of ductal origin and endoscopy in orthognathic surgery. It has also found a vivid role in facial rejuvenation surgeries and has given beautiful cosmetic results. A prospective study was conducted to define the role of endoscopes and their practicality as a surgical adjunct in the oral and maxillofacial surgery. In our study the Endoscope was found to be an extremely useful adjunct to the surgeon, while performing minimally invasive procedures on the patients. It helped us to gain adequate access, visibility, illumination and magnification to the operative sites which would otherwise require extensive exposures through conventional approaches.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 665****The Emerging 'Nano' Concepts in OMFS***Dr. Kuldip Mukhopadhyay**Dr. R. Ahmed Dental College and Hospital***Abstract****Background**

Nanotechnology is boon changing the healthcare in a fundamental way. The wide range of its clinical applications make it a promising future in the field of medicine as well as dentistry. With the use of nanomaterials, drugs with narrow therapeutic index, resistant antibiotics or toxic at higher dose can easily and safely be administered. It also enables to perform surgeries at cellular level and can be integrated with various materials to impart antibacterial, as a scaffold or osteointegration properties.

Aim and Objectives

To review and explore the clinical applications of nanotechnology in oral and maxillofacial surgery (OMFS).

Material and Method

Extensive web search was done using keywords like “Nanotechnology in OMFS” on Medline, Cochrane, Scopus and Google Scholar electronic resources.

Result

After reviewing it was found that the use of nanotechnology in the field of OMFS has many important applications in local drug delivery, wound healing and osteointegration.

Conclusion

With the use of nanoencapsulation, drugs with narrow therapeutic range and resistant antibiotics can provide therapeutic effect for a longer duration. In the field of surgery biodegradable nanostructure graft possesses antithrombogenic effects to increase its survival. Nanoscaffold allows external control over the healing tissue which can be helpful in nerve regeneration and implant osteointegration. Currently, nano tweezers and nanoneedles are under development which can further help in cell surgeries. Nanotechnology and its materials provided several benefits, but it has issues and challenges which restrain its use and must be dealt with.

Keywords Nanotechnology in OMFS**Category: Student: E-Poster****Theme: Research/New Technologies****Reg. Num.: 672****Liquid Biopsy***Dr. Archit Dhawan**Sardar Patel Post Graduate Institute of Dental and Medical Sciences*

Abstract

Liquid biopsy is the vision of easy blood sampling to monitor a cancer patient's disease status at any given time point. It can be used to help find cancer at an early stage, treatment planning, response to the treatment and cancer recurrence. Liquid biopsy is a blood test to look for cancer cells from a tumor that are circulating in the blood or for pieces of mRNA, ctDNA from tumor cells. Cancer research is currently focusing on finding less invasive and cost-effective methods to provide a more comprehensive view of the cancer profile, also to more easily monitor its evolution and therapeutic response. Many non-invasive techniques such as liquid biopsy have been recently proposed as supportive tools for diagnosis, prognosis, and follow-up. The idea of liquid biopsy is not restricted to oncology but also applicable to prenatal diagnostics, cardiovascular diseases or atherosclerosis. This e-poster summarizes the main techniques and applications of liquid biopsy in oral cancer.

References

1. Liquid biopsy of cancer: a multimodal diagnostic tool in clinical oncology Raffaele Palmirotta, Domenica Lovero, Paola Cafforio, Claudia Felici, Francesco Mannavola, Eleonora Pellè, Davide Quaresmini, Marco Tucci and Franco Silvestris *Ther Adv Med Oncol* 2018, Vol. 10: 1–24. <https://doi.org/10.1177/1758835918794630>
2. Liquid Biopsy: General Concepts: Geoffroy Pouleta, b Joséphine Massiasa Valerie Talyaa INSERM UMR-S1147, CNRS SNC5014, Paris Descartes University, Equipe labellisée Ligue Nationale contre le cancer, Paris, France; Beurofin-Biomnis, Lyon, France.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.:** 920**Adipose Derived Mesenchymal Stem Cells: An Advancement in Oral and Maxillofacial Surgery***Dr. Snigdha Praneetha, Dr. Vandana Shenoy**Thai Moogambigai Dental College and Hospital***Abstract**

Oral and maxillofacial tissue defects caused by tumors, trauma, and congenital or acquired deformities causes functional, esthetic and psychological problems to the patients and its management has been a major challenge for surgeons over the last few decades. Autologous tissue transplantation, the gold standard of tissue reconstruction, is a valid method for repairing the oral and maxillofacial functions and aesthetics. However, it has limited clinical applications due to certain drawbacks. Tissue engineering, provides an alternative approach. Current tissue engineering strategy utilizes living cells, biomaterials, and appropriate biochemical, physical factors, and the combinations to create tissue-like structures. The ultimate goal of the method is to incorporate these tissue-like structures into the body in order to repair the damage or replace dysfunctional organs. Adipose-derived mesenchymal stem cells (ADMSCs) have the potential to differentiate into mesenchymal (such as adipocytes, osteocytes, and chondrocytes) and non-mesenchymal (such as neuron-like cells) cells. This poster

presents the applications of ADMSCs in oral and maxillofacial surgery.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.:** 925**Recent Advances in Local Anaesthesia***Dr. Priyanka Gotmare**Terna Dental College***Abstract****Aim**

To present an overview regarding the efficient delivery and effective results by newer techniques used to provide local anaesthesia in dentistry.

Introduction

Using a needle causes mechanical trauma whilst penetrating oral mucosal tissues, initiating pain in the patient before anaesthetic itself is given. Newer agents and techniques have been developed to reduce the pain of anaesthetic injection, decrease the failure rates of achieving local anaesthesia and reduce the area anaesthetised and thus the residual effects of the anaesthesia.

Discussion

Various new techniques have been introduced to provide local anaesthesia such as electronic dental anaesthesia, jet injectors, computer controlled local anaesthesia like the WAND and comfort control syringes. Some new local anaesthetic delivery systems aim at easing the fear of the needle, take advantage of the gate control theory of pain management, which suggests that pain can be reduced by simultaneous activation of nerve fibres through the use of vibration. The major benefit of computerized delivery systems relate to the delivery of solution at a constant pressure, regardless of variations of resistance offered by tissue. These flow-rate control devices may enhance the precision of injection and improve patient comfort. The major disadvantages include technique sensitivity and high overhead cost.

Conclusion

New techniques are well accepted by patients to date. The computerized control local anaesthesia delivery systems seem to be the most effective procedures to deliver local anaesthetic without pain. Intraosseous devices have also shown significantly promising results in achieving supplemental anaesthesia. Newer technologies have been developed that can assist in providing enhanced pain relief with reduced injection pain and fewer adverse effects. However, the high costs and time required to enable dental anaesthesia must be taken into consideration.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 931****Artificial Intelligence Assisted Early Detection of Oral Cancer: A Review***Dr. Harmanjit Chahal**Sri Guru Ram Das Institute of Dental Sciences and Research, Amritsar***Abstract**

According to GLOBOCAN statistics, upto 60% of OSCC are detected at advanced stages (stage III–IV), especially in the Indian subcontinent, resulting in increasing morbidity and mortality and lower overall survival rates. Early diagnosis and accurate prognostication can be proven important determinant in improving the outcome of oral cancer. Histopathology however being an established and gold standard method for diagnosis of OSCC, has no established role in screening or early detection of the disease. This poster aims to provide an insight of recently published literature relating to artificial intelligence (AI) or machine learning (ML) method with emerging optical imaging modalities to aid in diagnostic evaluation of OSCC. AI is one of the recent technological advances and has been found to be advantageous in early diagnosis and screening of OSCC. Machine learning is a branch of AI, had been used to analyze a myriad of medical data which pertains histo-pathologic, fluorescents, hyperspectral and computed tomography for better prognostication in OSCC. AI can accurately predict the presence of OSCC as compared to conventional methods and thus significantly assist the clinical diagnosis and management of patient with OSCC.

References

1. García-Pola, María, et al. Role of Artificial Intelligence in the Early Diagnosis of Oral Cancer. A Scoping Review. *Cancers* 13.18 (2021): 4600.
2. Alabi, Rasheed Omobolaji, et al. Utilizing Deep Machine Learning for Prognostication of Oral Squamous Cell Carcinoma—A Systematic Review. *Frontiers in Oral Health* (2021): 44.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 936****Does Preformed Micromesh Made Other Fixation Modalities Obsolete in Treating Frontal Bone Injuries? An Observational Study***Dr. Shivani Gupta**Maharana Pratap College of Dentistry and Research Centre***Abstract****Aim**

To evaluate and compare the effectiveness of a preformed titanium micro mesh as an ideal material of choice in treating outer table fracture of frontal bone.

Objective

The objective of this study is to report our cumulative experience over the last 5 years in treating anterior wall fractures of frontal bone in terms of various types of fractures, surgical approaches and fixation materials.

Methodology

64 people diagnosed with frontal bone injuries included in our study. All patients were evaluated pre-operatively with ct scans before operating. The parameters used to classify the patients were age, mode of injury, type of fracture, non surgical management, surgical approaches, fixation patterns and combined maxillofacial and neurosurgical interventions.

Results

There was associated maxillofacial fractures seen in 49 patients with 31 patients requiring neurosurgical intervention. In 4 patients frontal sinus obliteration and cranialization was done. Anterior cranial floor repair followed by frontal mesh done in 10 patients, Conservative management was opted in 19 patients and the rest were isolated anterior frontal sinus fractures treated with plates and mesh. Surgical approach was through existing laceration and bicoronal approach. The overall contour of the frontal bone was good in all the patients with exceptional aesthetic results observed in patients treated using preformed micromesh.

Conclusion

We conclude that the use of preformed titanium micromesh has displaced other fixation modalities over the timelines. It has simplified the treatment part as it gives better esthetics and function.

References

1. Manolidis S. Frontal sinus injuries: associated injuries and surgical management of 93 patients. *J Oral Maxillofac Surg* 2004;62(7):882–891.
2. Zavattero E, Boffano P, Bianchi FA, Bosco GF, Berrone S. The use of titanium mesh for the reconstruction of defects of the anterior wall of the frontal sinus. *J Craniofac Surg*. 2013;24:690–1.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 962****Transoral Robotic Surgery***Dr. Priyanka G.**Indira Gandhi Institute of Dental Sciences***Abstract****Background**

Minimally invasive approaches compared to traditionally aggressive surgical approaches are the latest state of art techniques in surgical practice and are continuously evolving in wake of organ preservation, and with the objective of improving functional and aesthetic

outcomes, thereby, increasingly revolutionizing the level of care in medical field. DURING 1990's, NASA along with the Stanford research institute hoped to establish a program to perform operations on wounded soldiers from a remote location. TORS is based on the Da Vinci surgical system which consists of a command console.

Objective

To highlight the development, surgical set up, advantages, disadvantages and outcomes of TORS in anatomic sites concerning a maxillofacial surgeon.

Method

Electronic databases, primarily PubMed and Science direct, referred to identify relevant studies.

Findings

Use of a surgical robot to gain conservative access into pharyngolaryngeal surgical sites via oral cavity rather than employing more radical approaches. Potential advantages include better visualization and access to surgical sites via minimal invasion. With this technique, it is possible to overcome severe morbidities secondary to loss of large volumes of muscular tissue and organs associated with open surgery, thereby improving functional, cosmetic and oncologic outcomes.

Conclusion

TORS provides a novel treatment option to oral and maxillofacial surgeons for treating patients chiefly suffering from oropharyngeal cancer and obstructive sleep apnoea.

Reference

1. Dutta SR, et al. Transoral robotic surgery: A contemporary cure for future maxillofacial surgery. *J Oral Maxillofac Surg Med Pathol* (2016). <https://doi.org/10.1016/j.ajoms.2016.03.002>

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 981

Fabrication and Assessment of Biocompatibility And Cell Interaction of Chitosan Based Socket Plug (CBSP) Intended for Socket Preservation: An Animal Study

Dr. Anusha Sidhwa

Maharishi Markandeshwar College of Dental Sciences and Research, Haryana

Abstract

Alveolar ridge resorption is an irreversible phenomenon following dental extraction, which in turn leads to reduction in alveolar bone width and height. Several bone substitutes such as autografts, allografts, xenografts and alloplastic materials have been used to preserve the alveolar bone for optimal prosthetic rehabilitation and for the placement of osseointegrated implants. Chitosan is an alloplastic material developed as a substitute for hard and soft tissue grafts to eliminate the morbidity associated while harvesting autografts. Chitosan is biocompatible, antimicrobial, osteoconductive and can accelerate wound healing. The affordable nature of this new scaffold attract further research into chitosan as a tissue engineering scaffold. Even though chitosan has been available in various forms like beads/microspheres, hydrogels, films/membranes, fibres, sponge etc., it has

not been fabricated as a socket plug. The objective of this study is to fabricate chitosan based socket plug (CBSP) intended for socket preservation and to evaluate the invitro cytotoxicity, cell attachment and in vivo biocompatibility and compare it with the commercially available collagen plug. The study concluded that CBSP showed superior biocompatibility as compared to commercially available collagen plug and hence it can be used as an effective biomaterial for socket preservation. Further studies are needed both in vitro and in vivo to validate the observations.

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 982

Application of Virtual and Augmented Reality in Oral and Maxillofacial Surgery: A Literature Review

Dr. Nidhin R. S.

Pushpagiri College of Dental Sciences

Abstract

Background

Following technological advancements in the last few decades, there has been a growing interest towards virtual and augmented reality as applied to the surgical field. 'Virtual reality' is the art and science of creating computer generated environments that are designed to simulate person's physical presence in a specific environment which is designed to feel real, enabling the surgeon to visualize a particular lesion, plan a proper treatment as well as identify probable complications.

Aim

The aim of this poster is to provide an insight on the current application of virtual and augmented reality in Oral and Maxillofacial Surgery.

Method

Reviewing of literature was done by performing a thorough search through the electronic data bases like Pubmed, Google scholar, IJOMS, Science direct by using keywords such as virtual reality, augmented reality, simulation.

Result

Increasing interest in the use of this technology has been noted over past few decades, with dental implantology and orthognathic surgery being the most frequent applications, in the field of oral and maxillofacial surgery.

Conclusion

Virtual and augmented reality have contributed to the planning of maxillofacial procedures and surgery training. The importance of this imaging innovation can also be highlighted in improving the quality of care delivered to patients. Furthermore, virtual planning provides the operating surgeon with high level of accuracy via dynamic navigation.

Reference

1. Ayoub A, Pulijala Y. The application of virtual reality and augmented reality in Oral & Maxillofacial Surgery. *BMC Oral Health*. 2019 Dec;19(1):1–8.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 1000****Regenerative Technology in Oral and Maxillofacial Surgery: Present and Future***Dr. Snigdha Singh**Teerthanker Mahaveer Dental College and Research Center***Abstract****Introduction**

Regenerative nanotechnology is at the forefront of medical research, and is a challenge to both scientists and clinicians. Key questions remain about its actual benefits in Oral and Maxillofacial Surgery. This poster gives an account of its current use in OMFS and implications and challenges for the future.

Objective

To review the uses of regenerative nanotechnology in imaging, sentinel node biopsy, nanodelivery of drugs and as implantable materials and scaffold for engineering.

Methods

Nanoparticles were considered in 3 categories: (a) Fullerenes/Carbon allotropes (b) Quantum Dots (c) Nanocomposites.

Results

Nanomaterials have been used as biomedical implants. New biocompatible nanomaterials, which mimic the natural structure of bone, and nanofabrication techniques are now being used in clinical practice. Among nano-scaled drug delivery systems, liposomes and drug-conjugated nanoparticles for the treatment of cancer are of particular interest.

Conclusion

Well-designed double-blind RCTs that compare a “nano product” with a “non-nano product” are still necessary. Shift towards a fully nanotechnological future for oral and maxillofacial surgery will be evolutionary rather than revolutionary and this is what this poster aims at.

References

1. K. Shakiba, A. Tanb, V. Soskicd. Regenerative nanotechnology in oral and maxillofacial surgery. *Br J Surg* 2014, 432–6.
2. Loizidou M, Seifalian AM. Nanotechnology and its applications in surgery. *Br J Surg* 2010;97:463–5.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 1040****Comparison of Local Anesthetic Efficacy of 5% Tramadol Hydrochloride (with Adrenaline) and 2% Lignocaine Hydrochloride (with Adrenaline)***Dr. Madhuri Shah**KLE Society's Institute of Dental Sciences, Bangalore***Abstract**

Since more than two decades tramadol has been shown to have local anesthetic effect similar to lignocaine by many researchers because of its neurotransmitter blocking effect on peripheral nerves and it produces peripheral antinociceptive effects by interaction with peripheral opioid receptors.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 1042****G.I.R.O.S: The Second Window: A Literature Review***Dr. Ajit Powar**VK KLE Dental College, Belgaum***Abstract**

Each year amounts to about 600,000 new head and neck cancer cases with 300,000 deaths recorded. Despite marvelous advancements in chemotherapy and radiotherapy treatments, surgical management stands with the best overall survival rate. Complete resection with negative surgical margins improves the prognosis and decreases the progression rate. In that matter, optical imaging technologies has many advantages, as it is non-invasive, safe and has visualisation capabilities, high spatial resolution and is a low cost method. While the imaging using Near Infrared-I window has been the gold standard for several years, there is still room for improvement. The novel approach of using Near Infrared-II Window (NIR-II) is yet to be explored in greater depth. The use of NIR-II for biological imaging has remarkable potential for overcoming various issues, due to its progressively longer wavelengths beyond 1000 nm, which can achieve higher penetration depth, spatial resolution so as to obtain a more sensitive and better image. This poster provides a review of literature behind the use of NIR-II for Image guided Surgery hence titled the Infra-Red Guided Oral and Maxillofacial Surgery (G.I.R.O.S)—The Second Window.

References

1. Kenry;(2018). Recent Advances of Optical Imaging in the Second Near-Infrared Window. *Advanced Materials*, 1,802,394–.
2. Atallah I et al. Role of near-infrared fluorescence imaging in head and neck cancer surgery: from animal models to humans. *Eur Arch Otorhinolaryngol*. 2015 Oct;272(10):2593–600.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 1056****Future Scope of Stereolithography in Craniomaxillofacial Surgery: Review***Dr. Raghav S. Moorthy**Mahatma Gandhi Postgraduate Institute of Dental Sciences***Abstract****Aim**

To understand and explore the possibility of stereolithographic model, its practical implementation and innovative usage in craniomaxillofacial surgery.

Background

Stereolithography is new adjunct for treatment planning in craniomaxillofacial surgery and has emerged as a great method for various applications in surgery. It is a method of model production based on CT scan which enables the representation of complex 3D anatomical structure. It's quality is constantly evolving which makes it considerable choice to go after. Patients are benefitting tremendously and its usage is increasing at fast pace.

Conclusion

Stereolithography offers a wide range of indication and new aspects for accurate planning of complex surgical procedures. It provides excellent understanding of anatomic relationships, preoperative adaption of materials and decreased time in operating room. It allows the surgeon to hold the 3D physical model in hand and facilitates virtual surgery in an unobstructed view. Due to its characteristic stereolithography opens new prospective in planning of complex reconstruction. Future use of this new technology is recommended in other fields of craniomaxillofacial surgery, such as temporomandibular joint surgeries, orthognathic surgery, dental implant treatment and distraction osteogenesis of jaw. Currently its use in Indian scenario is limited because of the cost factor in CT scan and model fabrication. With the advancement of stereolithography and its increased accessibility, significant decrease in cost will certainly make it more common and widely adopted in craniomaxillofacial practice.

References

1. Matias M, Zenha H, Costa H. Three-dimensional printing: custom-made implants for craniomaxillofacial reconstructive surgery. *Craniomaxillofacial trauma & reconstruction*. 2017 Jun;10(02):089–98.
2. Sinn DP, Cillo Jr JE, Miles BA. Stereolithography for craniofacial surgery. *Journal of Craniofacial Surgery*. 2006 Sep 1;17(5):869–75.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 1069****Anesthetic Efficacy of 4% Articaine Infiltration versus 2% Lidocaine Nerve Block During the Surgical Removal of Mandibular Third Molar***Dr. Mrinalini Singh**Maharana Pratap College of Dentistry and Research Centre, Gwalio***Abstract****Objective**

In this time and age with the large range of anaesthetic agents available it is important for us to pick the right agents for the desired surgery keeping in mind to have minimal complications or after effects of the surgery. Local anaesthetic agents are the mainstay of intraoperative pain control for most oral surgical procedures. Surgical removal of third molars is the most commonly performed procedure by oral and maxillofacial surgeons. Since the discovery of cocaine as a local anesthetic, many advancements have been reported with regards to local anesthetic agents. Lignocaine is the most widely used local anesthetic agent in dentistry. It has been labeled as the “gold standard” to which all new local anesthetics are compared. In recent times there has been raised interest regarding the use of articaine hydrochloride as a dental local anaesthetic solution. The use of articaine hydrochloride as a dental local anaesthetic agent has been reported to be safe and effective. Articaine is an intermediate-potency, short-acting amide local anesthetic with a fast metabolism due to an ester group in its structure. It is effective with local infiltration or peripheral nerve block in dentistry. In comparative trials, its clinical effects were generally significantly different from those of other short-acting local anesthetics like lidocaine, prilocaine, and chlorpropocaine. Articaine proved to be suitable and safe for procedures requiring a short duration of action in which a fast onset of anesthesia is desired in dental procedures.

Clinical Relevance

Hemodynamic effect of local anesthetic should be investigated to prevent unwanted complications. The present study assessed the hemodynamic alterations and to assess the efficacy of articaine infiltration for surgical removal of third molars after injecting two of the most commonly used local anesthetic formulations for impacted mandibular third molar surgery.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 1082****Computer Assisted Navigation in Oral and Maxillofacial Surgery***Dr. Aravindan**Indira Gandhi Institute of Dental Sciences*

Abstract

The oral and maxillofacial region has a complicated anatomy including the brain, eyes, vital teeth, and important nerves and vessels. In many cases, it is necessary to perform imaging diagnosis with computed tomography or magnetic resonance imaging (MRI) prior to oral and maxillofacial surgery to clarify the surgical site and surrounding anatomical structures. The rapid development of imaging technology has made it possible to quickly process and visualize the large amount of data produced by various digital imaging modalities. Prerequisites for three-dimensional (3D) visualization and programs for computer-assisted 3D planning of surgical procedures have been established (1). Computer-assisted navigation system (CANS) surgery uses image processing data and can be divided into: computer assisted pre-surgical planning and navigation. Computer assisted pre-surgical planning includes preoperative surgical simulation with 3D images or models. Preoperative surgical simulations with 3D models, are useful to evaluate treatment and to acquire precise representations of the underlying skeletal anatomy of the patient. In this poster we will be discussing about the functioning of navigation system and its application in oral and maxillofacial surgery.

Reference

1. Azarmehr I, Stokbro K, Bell RB, Surgical Navigation: A Systematic Review of Indications, Treatments, and Outcomes in Oral and Maxillofacial Surgery. *J Oral Maxillofac Surg.* 2017 Sep;75(9):1987–2005.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 1094****Versatility of Computer Assisted Navigation System in Oral and Maxillofacial Surgery***Dr. Sushant Belsare**MS Ramaiah University of Applied Sciences***Abstract****Background**

The anatomy of the maxillofacial region is complex, with numerous vital structures. Currently oral and maxillofacial surgery poses significant challenge for surgeons due to the anatomic complexity and limited visibility from the oral cavity. In this digital age, navigation guided surgery is widely used to reduce risks and improve surgical precision. The navigation system is a computer-assisted surgical modality wherein instruments are synchronously positioned with a three-dimensional imaging of the patient's anatomy on CT scans. It was initially used in neurosurgery, later used in otorhinolaryngology and orthopaedics. It is currently being used in the preoperative, intraoperative, and postoperative assessments in maxillofacial surgeries. Applications of computer assisted navigation system include maxillofacial trauma surgery, complex midfacial fractures and orbital trauma reconstruction, foreign body removal, complex dentoalveolar, skull base, temporomandibular joint, dental implant surgeries and orthognathic surgeries.

Methodology

The various applications of computer assisted navigation system in oral and maxillofacial surgery were analyzed through a thorough search across Scopus, PubMed and Google scholar using appropriate keywords along with a comprehensive manual search of various journals and textbooks.

Conclusion

Computer assisted navigation surgery proves to be a valuable surgical armamentarium due to its accuracy, reliability, improving procedure safety, predictability, and precision. It is highly recommended particularly in complex cases and can result in better outcome.

Reference

1. Sukegawa, et al. (2018). Application of computer-assisted navigation systems in oral and maxillofacial surgery, *Japanese Dental Science Review* (Vol. 54, Issue 3, pp. 139–149)

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 1182****Facial Esthetics: A Treasure Trove for Maxfax***Dr. Suprathima Saritha R.**JSS Dental College and Hospital, Mysuru***Abstract****Aim**

Oral and maxillofacial surgeons can help their patient (and other speciality dentist) pursue not just functional but also cosmetic improvement enhancing overall treatment outcome and patient satisfaction. The aim of this poster is to make sure that all maxfax surgeons are aware and abreast of advances in all areas of esthetics in OMFS.

Introduction

Dentistry and its related specialties have made exponential increases in the functional and cosmetic treatment of the maxillofacial region. Oral and maxillofacial surgeons historically have been involved in functional and cosmetic rejuvenation of the face, and newer technologies have enhanced the ability to make patients look and feel better. The safe and effective administration of injectable fillers and neurotoxins requires a command of head and neck anatomy and physiology, pain control, and injection expertise, which puts oral surgeons in an optimal position for providing these treatments.

Conclusion

There is a need to transition the focus from just treating oral diseases to cosmetic and rejuvenation therapy. A global diagnosis and treatment plan to include facial esthetics can enhance the world of cosmetic surgery and help us, the oral surgeons, set a stronger footing among fellow plastic surgeons.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 1223****AI in Maxillofacial Surgery: To Break New Ground***Dr. K. Aishwarya**A.J. Institute of Dental Sciences***Abstract****Background**

The use of artificial intelligence (AI) is expanding like never before in the field of surgery. With deep understanding of artificial neural network, convolutional neural network (CNN) behaviours of the systems, clinicians gets upper hand in various modalities of healthcare system. Within the realm of maxillofacial surgery, AI is being used in radiology, diagnosis of head and neck cancer, prognosis and treatment planning of orthognathic surgeries, identifying subgroups of TMJ internal derangements, predicting swelling after impacted 3rd molar extractions, data acquisition and processing.

Aim

To highlight the current trends in using AI in maxillofacial surgery, its advantages and limitations.

Method

The literature was identified by performing a through search in the electronic data bases like Pubmed, Google scholar, Science direct, JCDA, IJOMS digital library published over the last five decades by using key words like AI, deep learning, machine learning, CNN and computer aided diagnosis.

Results

The review showed a trend of increasing AI use but revealed under utilization of AI applications to its potential in maxillofacial surgery as compared to other sectors.

Conclusion

The AI powered systems have performed magnificently in various scenarios, sometimes more accurate than clinicians. The diagnostic accuracy, enhanced decision making, predicting prognosis of AI helps render quality care.

References

1. Nguyen et al.(2021). Use of AI in Dentistry: Current Clinical Trends and Research Advances. JCDA. 87. 17.
2. Chen YW et al. AI in dentistry: current applications and future perspectives. Quintessence Int. 2020;51(3):248–257.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 1279****Lights on the ‘Fourth Salivary Gland’ and Its Implications on Radiotherapy***Dr. Sooraj S. Pillai**Teerthanker Mahveer Dental College and Research Center***Abstract**

Oral and maxillofacial surgeons are aware of the presence of 3 pairs of macroscopic salivary glands. But recently, a bilateral salivary gland had been visualized in the human nasopharynx by positron-emission tomography (PET) or computed tomography (CT) with prostate-specific membrane antigen ligands. The characteristics of this previously unnoticed gland, and its potential clinical relevance for radiotherapy are to be unraveled. The vital organ was found in a retrospective cohort study where in subjects included patients who consecutively underwent scan of prostate or urethral gland. The morphology of this gland was assessed in a human cadaver study. The effect of radiotherapy on salivation and swallowing were studied in data collected from 723 head and neck cancer patients. Radiotherapy can damage the salivary gland which leads to difficulty in eating, swallowing and speaking. Scientists assume that the physiological function of the tubarial glands to be of moistening and lubrication of the Nasopharynx and Oropharynx. The recently introduced molecular imaging modality of PET/CT with radio-labelled ligands can visualize salivary glands with high sensitivity and specificity. The discovery of this new salivary gland is not only surprising but can also be beneficial to head and neck cancer patients by preventing radiation delivery to this gland. By this, patients may experience less side effects which will benefit their overall “Quality of the Life”, post radiotherapy and contribute positively for the 5-year survival rate.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.: 1281****C-Arm and Mini C-Arm: A Real Time Diagnostic Tool for OMF Surgeons***Dr. Dadwe Aayush Abhay**A.B Shetty Memorial Institute of Dental Sciences***Abstract**

Inappropriate use of metal instruments, such as needles, probes, scalpel blades, and can result in their breakage during surgery. These are then capable of moving to an unexpected site in soft tissue or interfering with further treatment procedures, like tooth extractions and implant placement. Therefore, these broken parts must be removed to prevent further damage of neighboring tissue or consequent complications. It is not easy to define the exact location of the broken instruments intraoperatively in the changeable head position, even though computer tomogram (CT) or conventional plain X-rays give some information about its location in static head posture. As conventional C-arm used for orthopedic surgery was too large to utilize therefore dental mini c-arm was introduced. There are various studies where dental mini C-arm was beneficial in determining and confining the location of the broken object with intraoperative real-time information, especially for soft tissues. Its small size is adequate for the application of removing foreign bodies in the oral and maxillofacial area and is regarded as a safe and easily controllable device. In this presentation we will try to put light on various other

application of C-Arm such as reduction in ZMC fractures and other maxillofacial surgeries.

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 1293

Stainless Steel Ties: A Customized Alternative Technique of Intermaxillary Fixation

Dr. Aamir Zubair Shaikh

Yenepoya Dental College, Mangalore

Abstract

Background

Maxillo-mandibular fixation (MMF) establishes dental occlusion to treat maxillo-mandibular fractures. For decades, Wire based techniques such as Ivy loops and Erich arch bars have remained as a reliable, versatile and a standard care with limitations such as wire stick sharp injuries to soft tissue, consuming operating room time and limits oral hygiene. Still, the need remains for an efficient, safe and non-invasive MMF.

Aim and Objective

To evaluate the method, time and strength of clinical application of stainless steel ties (SST) in MMF.

Methodology

The customized SST is a non-invasive device constructed of a blunt introducer on one end and a smooth clasp-head on the other side. Each tie was applied through the interdental space, creating the balanced series of bilateral fixation to access cases of maxillomandibular fracture which is done by tie tensioning tool followed by intermaxillary-fixation (IMF) by wires/elastics.

Results/Findings

The customized SST is a non-invasive device with superior strength which reduces operating-room time and limits number of ties used to achieve a stable IMF.

Conclusion

This poster describes the method of application and removal of the SST in a dental stone model. Therefore, the customized SST is a safe, non-invasive device with superior strength with limited device failure.

Reference

1. Dental-occlusion ties: A rapid, safe and non-invasive MMF technology by AlanWJohnson, MD, MS. PMID: 28894837.

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 1319

Carnoy's: How Much Do We Know About It?

Dr. S. Seetha

C.S.I College of Dental Sciences and Research

Abstract

Carnoy's solution is routinely used as adjuvant therapy in the management of odontogenic keratocyst (OKC). The success of the use of this agent after enucleation or curettage is best explained by its penetration and fixation property. However, recent literature have found to have abundant efficacy in aggressive benign jaw lesions other than OKC. Hence, this study aims in exploring application of use and versatility of Carnoy's solution as treatment adjunct other than Odontogenic keratocyst (OKC).

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 1327

Comparison of Efficacy of Conventional Forceps and Exomed in Extraction of Teeth

Dr. Hamand Apurva Abhay

AB Shetty Memorial Institute of Dental Science

Abstract

Introduction

Atraumatic Tooth extraction techniques are important to maintain bone for prosthetic rehabilitation and for orthodontic extractions. Exomed is a device that works on the principle of vertical extraction, ensuring extraction with minimal trauma, preserving alveolar and gingival tissues.

Aims and Objectives

To compare efficacy of exomed and conventional forceps in extraction of teeth under following criteria: To assess:

1. Soft and hard tissue changes post extraction.
2. Time taken between 2 different methods of extraction.
3. Radiographic changes immediately and post operatively.

Materials and Methods

20 patients were divided into 2 groups, indicated for orthodontic extraction of bilateral maxillary premolar. Split mouth design was implemented and each patient was subjected to extraction of maxillary bilateral premolar by two methods of extraction. Clinical outcomes were evaluated for time taken for extraction, wound healing of socket, fracture of root and buccal cortical plate. Bone changes were assessed using CBCT.

Results

Our study showed that the time required for extraction with Exomed (1.93 min) was significantly higher than conventional forceps (0.183 min). Mean bone loss seen with exomed (0.075 mm) was significantly lesser than conventional forceps (0.145 mm).

Conclusion

Vertical extraction system is comparatively superior to conventional forceps in terms of lesser tendency to induce trauma to hard and soft tissue.

Reference

1. Adam Weiss, Avichai Stern, Harry Dym. Technological Advances in Extraction Techniques and Outpatient Oral Surgery. *Dent Clin N Am* 2011; 55:501–513.

Exomed: Manual of extraction**Category: Student: E-Poster****Theme: Research/New Technologies****Reg. Num.:** 1329**Smart Onco-Knife***Dr. Sara Nikhat**AL Badar Rural Dental College and Hospital, Gulbarga, Karnataka***Abstract**

Surgical manipulation of tissues has evolved during the early twentieth century. Surgical excision remains the gold standard of care for most solid tumors. However, there are almost no intra-operative technologies that allows real time analysis of cancer tissue clearance. iKnife coupling rapid evaporative ionization mass spectrometry (REIMS) and electrosurgical knife allows for real time analysis of tissues and detection of malignancy while the tissue is being cut. The tumor tissue is distinguished from the normal tissue by analysis of spectral profile of lipids generated from surgical plume by diathermy or laser which is incorporated into a multivariate statistical analytical software. The software pulls tissue-specific spectral profiles or “fingerprints” from an online library and algorithms allow for the characterization of the spectral profile into tissue diagnostic data thus differentiating tumor cells at the margins during surgery. In this poster, Rapid evaporative ionization mass spectrometry (REIMS) based iKnife will be presented.

References

1. Jundt, J.S., Marchena, J.M., Hanna, I., Dhanda, J., Breit, M.J. and Perry, A.P., 2019. Evolving Technologies for Tissue Cutting. *Oral and Maxillofacial Surgery Clinics*, 31(4), pp. 549–559.
2. Dhanda, J., Schache, A., Robinson, M., Bodai, Z., White, E., Temelkuran, B., Yang, G.Z. and Takats, Z., 2017. iKnife rapid evaporative ionisation mass spectrometry (REIMS) technology in head and neck surgery. A ex vivo feasibility study. *British Journal of Oral and Maxillofacial Surgery*, 55(10), p. e61.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.:** 1362**Role of Navigation System in Oral and Maxillofacial Surgery***Dr. Akshpreet Kaur**Dasmesh Institute of Research and Dental Sciences, Faridkot***Abstract**

Surgeries related to the maxillofacial area deal with an intricate network of anatomical structures. With the complexity of the vital structures, it necessitates a surgical team to respect each anatomical boundary. In the past, there was an exceptionally high number of cases with surgical errors. These errors were not because of flaws in the surgeon’s skills or techniques but owing to lack of resources, limited surgical exposure and distorted anatomic landmarks resulting from the trauma, make these repairs difficult. Visualization is one of the key factors that determines the precision of any surgical outcome. The navigation system allows surgeons to know the actual position of each instrument during the operation, in real time. Navigation technology is based on the synchronization of the intraoperative position of the instruments with the imaging of patient’s anatomy previously obtained by CT or magnetic resonance imaging. In maxillofacial surgery, navigation technology has been introduced in procedures such as tumour resection, deformity correction, craniomaxillofacial reconstruction and implantation. Using navigation system, different surgical procedures can be simulated and thus individualized optimal surgical planning can be made. In this E-poster, we explore the scope of this innovative technique in Oral and Maxillofacial Surgery, recent advancements and research related to it.

Category: Student: E-Poster**Theme: Research/New Technologies****Reg. Num.:** 1364**Salivary Markers for Oral Cancer Detection***Dr. Ravindra Reddy***Abstract****Introduction**

Oral cancer is among the deadliest types of malignancy due to the late stage at which it is usually diagnosed, leaving the patient with an average five-year survival rate of less than 50%. The booming field of biosensing and point of care diagnostics can play a major role in the early detection of oral cancer.

Materials and Methods

Saliva is gaining interest as an alternative biofluid for non-invasive diagnostics, and many salivary biomarkers of oral cancer have been proposed. While these findings are promising for the application of salivaomics tools in routine practice, studies on larger cohorts are still needed for clinical validation.

Results

Oral cancer diagnosis, prognosis and treatment is given to define the clinical problem clearly, then saliva as an alternative biofluid is presented, along with its advantages, disadvantages, and collection procedures and also aims to summarize the most recent development in the field of biosensing related to the detection of salivary biomarkers commonly associated with oral cancer.

Discussion

An overview of the state of the art regarding salivary biomarkers for the diagnosis of oral cancer, which are presented along with their

common metrics of comparison. The role of saliva in clinical diagnosis is explained, followed by a description of established laboratory techniques for salivary analysis. Lastly, the focus shifts on innovative diagnostic tools, namely biosensors and wearable sensing platforms, which are deemed to be a promising avenue for ultrasensitive and noninvasive early stage detection of salivary biomarkers related to oral cancer.

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 1386

3D CT Planning in Orthognathic Surgery: An Observational Study

Dr. Shilpa A. Joshi, Ramdas Balakrishna

K.L.E Dental College and Hospital

Abstract

Introduction

Orthognathic surgery brings about harmonious relationship between the jaws, resulting in improved facial profile and esthetics. With the advent of 3-D technology in surgical practice, 3-D imaging, virtual planning and simulation surgery are now available to assess the craniofacial structures and improve the outcomes of surgical procedures in an Orthognathic procedure.

Aims

To assess the accuracy achieved by using “3D CT planning and splint guided surgical procedures” in Orthognathic Surgery.

Materials and Methods

1. Pre surgical orthodontics.
2. Pre surgical clinical examination, photographs and CT scans.
3. Models poured and converted to DICOM format.
4. Combined with CT data to make a virtual replica of facial.
5. Splints fabricated for the new relationship achieved.
6. Surgery performed as per virtual planning guided by splints.
7. Post-op evaluation and comparison.

Results

Results indicated that though there were minor discrepancies in the planning and post op values they were negligible and of no clinical significance.

Conclusion

3D CT planning is a reliable tool to arrive at predictable results and to simplify the surgical plan. Proper surgical planning, accurate diagnosis, correct sequencing and good surgical technique are needed to make 3D CT planning successful.

References

1. Swennen GR, Mollemans W, Schutsyter F. Three-dimensional treatment planning of orthognathic surgery in the era of virtual imaging. *Journal of Oral and Maxillofacial Surgery*. 2009 Oct 1; 67(10):2080–92.
2. Linn HH, Lonic D, Lo LJ. 3D Printing in Orthognathic Surgery—A literature review. *Journal of the Formosan Medical Association*. 2018 Jun 1; 141(6):925e-36e.

Category: Student: E-Poster

Theme: Research/New Technologies

Reg. Num.: 1404

Unilateral Condylar Hyperplasia: A Rare Occurance

Dr. Abhirami Srikanth

SRM Dental College, Ramapuram

Abstract

Introduction

Condylar hyperplasia is a rare pathology characterized by excessive bone growth that virtually presents unilaterally, resulting in facial asymmetry. The etiology is idiopathic. It is categorized into three types. The type I deformity is the most common variant wherein, the mandible is asymmetric, with deviation of the chin to the contralateral side and a concomitant dental crossbite. In type II deformity, deviation of the chin is not a prominent feature, but a marked vertical open bite is present on the ipsilateral side of the hyperplasia and type III deformity is a combination of both. The aim of my poster is to present a case of unilateral condylar hyperplasia in a twenty-four-year-old male.

Case Report

A 24-year-old male patient reported to our department, with a chief complaint of jaw turned towards left side of face, difficulty in mastication and food accumulation since 6 years. On extraoral examination, gross facial asymmetry. Chin was deviated towards left side, downward displacement and bowing of mandible, increased lower one third facial height, rounding of gonial angle, slight downward movement of lip line in right side. On intraoral examination, shift of midline towards left side, prognathic mandible with anterior crossbite, end on occlusion in relation to right side, cant of occlusion plane shifted to left side and mouth opening of 40 mm was noted. Diagnosis made was unilateral condylar hyperplasia secondary to trauma in relation to right side. Treatment done was right condylectomy and BSSO under general anesthesia.

Category: Student: E-Poster

Theme: TMJ Disorders and Surgery

Reg. Num.: 142

Case Report on Idiopathic Condylar Resorption

Dr. Avapati Pravallika, Prof. Dr. Col. Suresh Menon

Vydehi Institute of Dental Sciences and Research Centre, Bangalore

Abstract

A variety of pathologic conditions, such as osteoarthritis, rheumatoid arthritis, condylar hyperplasia, and idiopathic condylar resorption (ICR), affect the temporomandibular joints (TMJ). Idiopathic condylar resorption (ICR) is a specific condition that affects the jaw

joints and most commonly occurs in teenage girls. ICR is also known as idiopathic condylar resorption, condylar atrophy, and progressive condylar resorption. This is a well-documented but poorly understood disease process that occurs with a 9:1 female-to-male frequency ratio. Because condylar resorption favors women over men, many have speculated that a prominent feature of the pathogenesis of the disease may be related to sex hormones. We are presenting a case of 21 years old female patient suffering from aggressive unilateral condylar resorption for 4 years. She has been diagnosed with disturbances in menstrual cycle with estradiol imbalances for which she is taking Tab. Femilon (contraceptive pills). Other prominent features include a convex facial profile and ipsilateral canine crossbite. Here in this poster, we have discussed possible etiologies and various treatment modalities for the same.

References

1. Alsabban L, Amarista FJ, Mercuri LG, Perez D. Idiopathic condylar resorption: a survey and review of the literature. *Journal of Oral and Maxillofacial Surgery*. 2018 Nov 1;76(11):2316-e1.
2. Gunson MJ, Arnett GW, Formby B, Falzone C, Mathur R, Alexander C. Oral contraceptive pill use and abnormal menstrual cycles in women with severe condylar resorption: a case for low serum 17 β -estradiol as a major factor in progressive condylar resorption. *American Journal of Orthodontics and Dentofacial Orthopedics*. 2009 Dec 1;136(6):772–9.

Category: Student: E-Poster

Theme: TMJ Disorders and Surgery

Reg. Num.: 313

Osteochondroma of Mandibular Condyle with Facial Warp: Comprehensive Surgical Management and Functional Rehabilitation

Dr. Vaidehi Bhatt, Dr. Rushit Patel

Narsinhbhai Patel Dental College

Abstract

Introduction

Primary neoplasms originating in the TMJ are extremely rare. Their clinical manifestations are usually related to the TMD and include pre-auricular swelling, pain, trismus, deviation of mandibular movement and malocclusion. Osteochondroma is an osseous protuberance with cartilaginous growth potential and commonly arises in bones formed by endochondral ossification. The most commonly occurring sites in the craniofacial region are the condyle and the coronoid process.

Case Presentation

A 50-year-old female presented to our department with a chief complaint of pain over left ear region for the past 1 month. On examination, gross facial asymmetry was noticed due to deviation of mandible towards right side with prognathic appearance. Deranged occlusion with crossbite. On TMJ lateral movements, a hard bony mass was palpable along with crepitus and clicking sounds. CT showed an irregular bony outgrowth at left condyle of mandible, measuring 27 × 25 mm in size.

Discussion

Osteochondromas are usually asymptomatic and symptoms may develop as consequences of size, impingement on adjacent structures such as nerves, or fracture through the stalk causing pain.

Conclusion

This poster describes the details of a case of Osteochondroma arising in mandibular condyle and comprehensive surgical management and functional rehabilitation.

References

1. Kurita K, Ogi N, Echiverre NV, Yoshida K. Osteochondroma of the mandibular condyle. A case report. *International Journal of Oral and Maxillofacial Surgery*. 1999;28(5):380–382.
2. Karasu HA, Ortakoglu K, Okcu KM, Gunhan O. Osteochondroma of the mandibular condyle: Report of a case and review of the literature. *Military Medicine*. 2005;170(9):797–801.

Category: Student: E-Poster

Theme: TMJ Disorders and Surgery

Reg. Num.: 362

Diagnosis and Management of Temporomandibular Disorders

Dr. Eleti Ooha Reddy

SVS Institute of Dental Sciences

Abstract

Temporomandibular joint disorders, commonly called TMJ, are a group of conditions that cause pain and dysfunction in the jaw joint and the muscles that control jaw movement. Temporomandibular disorders (TMD) aren't only one problem, however a gathering of conditions, regularly agonizing, that influence the temporomandibular joint, and the muscles that control biting. Numerous psychological and physical factors cause myofascial pain, internal derangement of the joint, degenerative joint disease which at last prompts temporomandibular disorder. Researchers are investigating how social, mental and actual elements might join to cause temporomandibular disorders and analysts are attempting to explain temporomandibular disorders symptoms, fully intent on creating simpler and better techniques for conclusion and further developed treatment. This poster discusses about outline of diagnosis, treatment and management of TMJ disorders.

References

1. Al-Ani M, Davies S, Gray R, Sloan P, Glennly A (2004) Stabilisation splint therapy for temporomandibular pain dysfunction syndrome.
2. Luther F, Layton S, McDonald F (2010) Orthodontics for treating temporomandibular joint (TMJ) disorders.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 413****Condylar Osteomyelitis: A Report of Two Cases***Dr. Dhanalakshmi P.**Sree Balaji Dental College and Hospital Pallikaranai Chennai
600100***Abstract****Background**

Osteomyelitis is defined as an inflammatory condition of bone, that begins as an infection of medullary cavity and haversian system of the cortex and extends to involve the periosteum of the affected area. Osteomyelitis of the mandible is usually odontogenic in origin and the dentate part is usually affected. Hence, involvement of the condyle and coronoid processes is very rare.

Materials and Methods

This poster is a report of two unique cases of condylar osteomyelitis treated in our department.

Result

Both the cases were successfully treated with condylectomy and antibiotics and no post operative complications or recurrence was noted in both the cases.

Conclusion

Odontogenic/otological and tuberculous cause should be suspected in cases of osteomyelitis of condyle. Condylectomy with appropriate antibiotics is preferred to eliminate the disease in its entirety.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 493****OK-432 (Picibanil) Sclerotherapy for Recurrent Dislocation of Temporomandibular Joint***Dr. Subhiksha Ramachandran**Maulana Azad Dental College and Hospital, New Delhi***Abstract**

TMJ dislocation is considered one of most serious disorder when the condyle travels down and anterior to the articular eminence. It occurs unilateral or bilateral, nonreducible or reducible. The laxity of ligaments, muscle spasm and continuous involuntary jaw movement aggravate it. Inj of OK-432 into the temporomandibular joint as nonsurgical treatment modality for chronic recurrent temporomandibular dislocation is considered safe and successful treatment.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 507****The Multiple Treatment Meta-analysis of Interarticular Injection Temporomandibular Osteoarthritis***Dr. MD Tousif Alam**Divya Jyoti College of Dental Science and Research***Abstract****Purpose**

The purpose of this study was to compare the efficacy of intra-articular injections of different agents for temporomandibular osteoarthritis (TMJOA) by network meta-analysis.

Methods

Randomized controlled trials comparing effect of intra-articular injections of different agents in TMJOA were included according to the inclusion and exclusion criteria. Primary outcome included pain intensity and maximal mouth opening.

Results

11 Trials were included in this study and 10 different agents (hyaluronic acid, dexamethasone, prednisolone, betamethasone, betamethasone plus hyaluronic acid, morphine, Tramadol, PDGF, placebo, arthrocentesis alone) applied by intra articular injections were assessed. The evidence from direct comparisons showed that the arthrocentesis + Sodium hyaluronate group had significantly better outcome in pain relief compared to the arthrocentesis alone group. and injection of platelet derived growth factor after arthrocentesis (arthrocentesis + platelet-derived growth factor) could further decrease 1.27 VAS in intensity of pain compared to arthrocentesis alone. When considering pain relief, arthrocentesis + Sodium hyaluronate group have better outcome than arthrocentesis alone group, and arthrocentesis + platelet-derived growth factor is better than arthrocentesis + placebo. PDGF injection showed the highest probability of being the best treatment for improving joint opening, followed by sodium hyaluronate.

Conclusion

Hyaluronic acid injection was effective for improving MMO of TMJOA patients in the short-term effect. The combination of corticosteroid and hyaluronic acid injection could reduce symptoms of TMJOA more than corticosteroid injection alone, but not hyaluronic acid.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 520****A Comparison of Various Surgical Approaches to the Condyle***Dr. Abhishek Jha**SCB Dental College and Hospital*

Abstract**Introduction**

The literature replete with myriad of surgical approaches to the mandibular condyle. The indications for approaching condyle-ramus unit (CRU) include ORIF condylar fractures, surgery-TMJ ankylosis, surgery-internal derangement, and alloplastic TMJ replacement.

Methodology

This study evaluated commonly used transcutaneous extra-oral approaches to condyle like preauricular, Al-Kayat-Bramley, preauricular deep fascial, retromandibular, transmasseteric-anterior parotid (TMAP), submandibular and the vascular-guided-multilayer-preauricular (VMPA) approaches. Each approach evaluated for accessibility to surgical site, postoperative facial nerve function, and esthetic outcome.

Results

Total 47 condyles were opened over 3-year from 2017 to 2019. Respect to surgical access, the preauricular approach, suitable for approaching the condylar head, disc and neck, especially disc repositioning surgery for internal derangement and ORIF for condylar neck fractures. The Al-Kayat-Bramley, for gap arthroplasty with temporalis myofascial flap for TMJ ankylosis. The retromandibular and TMAP approaches proved effective when negotiating the sub-sigmoid or subcondylar regions ORIF. Submandibular approach rarely employed for condylar fractures, useful for TMJ alloplastic joint replacement. Regarding facial nerve function, preauricular and AlKayat Bramley approaches showed highest incidence of transient facial neve palsy. For esthetic outcomes, TMAP approach demonstrated best cosmetic outcome with well camouflaged low incision in neck.

Conclusion

Each above described approach has indication for accessing CRU. Each approach has advantages and disadvantages. The surgeon must familiar with these approaches, so that he employ them as and when required.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 531****A Tale of 40 Years of Trismus***Dr. Aditya Agrawal**Meenakshi Ammal Dental College and Hospital, Chennai***Abstract**

Trauma to TMJ in early childhood can affect the growth potential of the mandible. Any traumatic injury to the joint, if left unnoticed and untreated immediately can cause loss of growth and permanent trismus. A 51 years old female patient with a history of trauma to chin and NIL mouth opening since 40 years, was treated for TMJ ankylosis. Gap arthroplasty was done bilaterally by exposing and removing ankylotic mass and a gap of 1.5 cm was created, through Alkayat and bramley preauricular approach. Temporalis muscle and fascia graft was raised and interpositioned. Bilateral coronoidectomy was done and Closure achieved. Mouth opening of 40 mm achieved. After 2 weeks of IMF, post operative physiotherapy was done with the help of Dr. Shekar's appliance, which was easier and efficient for the patient to follow. Surgical intervention (Interpositional gap

arthroplasty) combined with physiotherapy proves to be one of the best methods in treating TMJ ankylosis cases with a history of trauma left untreated since many years. However, follow up of patient plays a key role in the success of the treatment.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 557****MRI of Normal TMJ and TMJ with Internal Derangement***Dr. Mohammed Yaseen Sharief**Sri Hasanamba Dental College and Hospital, Hassan***Abstract**

Temporomandibular joint (TMJ) dysfunction is a common problem and affects up to one-third of all adults at some stage in their life. The most frequent cause of TMJ dysfunction is internal derangement which refers to an alteration in the normal pathways of motion of the TMJ that largely involves the function of the articular disc, therefore, these alterations have been also referred to as disc derangement. Anterior disc displacement (ADD) is one of the major findings in TMJ internal derangement. Anterior disc displacement with reduction (ADDWR) and anterior disc displacement without reduction (ADDWOR) are the two most common forms of TMJ disc displacement. Thereby, Magnetic resonance imaging (MRI) techniques allow analysis of disc position in both sagittal and coronal planes, dynamic assessment of condylar translation and disc movement during opening and closing the mouth. This poster illustrates the MRI images of normal relationship between the disc and condyle in different position of mouth opening and closing and the same in a joint with internal derangement.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 706****Distraction Osteogenesis in TMJ Ankylosis***Dr. Thaseen Begum S.**Ragas Dental College***Abstract****Background**

Gap arthroplasty and costochondral rib bone graft are commonly performed by oral and maxillofacial surgeons to reconstruct the temporomandibular joint with ankylosis. However, unpredictable an unsatisfactory result such as re-ankylosis, growth disturbance, and facial asymmetry often occur. Even if the costochondral graft is successful, donor-site morbidity is inevitable. More recently, surgeons

have become interested in distraction osteogenesis as a means of temporomandibular joint reconstruction.

Methods

However, there is still some controversy over the proper sequencing of management for the ankylosed patients treating with distraction osteogenesis. There have been 3 methods regarding application of distraction osteogenesis in the treatment of TMJ ankylosis: simultaneous osteodistraction with ankylosis release; release of ankylosis followed by osteodistraction at a later stage; and osteodistraction followed by release of ankylosis at a later stage.

Result

One of the main advantages of distraction osteogenesis is that because of controlled distraction of the bone, there is not only elongation of the mandibular bony tissue, but also proportional and harmonic modification of the surrounding soft tissues. Mandibular distraction can improve the facial profile and provide relief to the airway obstruction in the patient with retruded mandible due to TMJ ankylosis.

Conclusion

However, Distraction Osteogenesis is best performed after a detailed preoperative evaluation by the oral surgeon and orthodontist and the development of a comprehensive treatment plan.

Reference

1. Staged Treatment of Temporomandibular Joint Ankylosis With Micrognathia Using Mandibular Osteodistraction and Advancement Genioplasty-Jihua Li, DDS, Songsong Zhu, DDS, Tao Wang, DDS, En Luo, PhD, Lin Xiao, DDS.

Category: Student: E-Poster

Theme: TMJ Disorders and Surgery

Reg. Num.: 709

Comparison of Incidence of Paresis of Temporofacial Branch of Facial Nerve in Classical Al-Kayat Bramley Approach versus Deep Subfascial Approach

Dr. Arnab Kumar Dey

Guru Nanak Institute of Dental Sciences and Research

Abstract

Background

There are various methods for exposing the Temporomandibular joint area, each with its own set of benefits and drawbacks. Damage to the facial nerve can result in loss of facial expression as well as functional and cosmetic issues.

Aims/Objectives

The purpose of this study is to evaluate and compare the facial nerve weakness using House and Brackman nerve grading system through classical Alkayat Bramley and Deep sub-fascial approaches.

Method

A randomized study was performed for one year on 10 patients requiring surgical intervention to the TMJ/Condylar region. Subjects were randomly recruited and divided into 2 groups of 05 patients each; Group-A Classical approach to TMJ through Alkayat Bramley incision and Group-B Modified subfascial approach to TMJ through Alkayat Bramley incision. The evaluation of facial nerve function was

done subjectively postoperatively on the 1st, 3rd, 7th, 30th, 90th, and 180th day. The data were analyzed using the Mann Whitney *U* test.

Results

The comparison of the difference between the groups for postoperative facial nerve function at various time intervals gave significant differences ($p > 0.05$). In terms of quality of life, there was a significant difference at 1 month postoperatively ($p < 0.001$) amidst the two approaches. A significant difference in mean grading was noted on 3rd, 7th, 30th, and 90th days postoperatively.

Conclusion

The study reveals that the Deep Subfascial approach is the safest among the preauricular TMJ approaches to avoid injury of the facial nerve.

Category: Student: E-Poster

Theme: TMJ Disorders and Surgery

Reg. Num.: 872

Arthroscopic Discopexy in Management of Temporomandibular Joint Internal Derangements

Dr. Supratim Mondal

Saraswati Dental College Lucknow

Abstract

Internal derangement is functional disorder of temporomandibular joint (TMJ) frequently caused by anterior and medial displacement of articular disc, which causes pain and dysfunction, results in abnormal mandibular function and characterised by reciprocal clicking of the joint(s). Internal derangement causes limited function, painful TMJ movements, pain in preauricular region, tenderness of masticatory muscles. Treatment of Internal derangement of TMJ may be approached surgically and non-surgically. The most commonly performed surgical procedures for correction of mechanical interference in TMJ are arthroscopic discopexy and discotomy. TMJ arthroscopy gained wide popularity due to its minimal invasiveness, fewer post-operative clinical complications and shorter hospital stays when compared to open surgery. Standard TMJ arthroscopies involve lysis and lavage of superior joint space, while more advanced procedures include discopexy. Arthroscopic discopexy is surgical procedure of repositioning the displaced disc back into its normal position. Arthroscopic discopexy technique is effective surgical method for improvement of joint function and reduction of pain. As being minimally invasive approach arthroscopic discopexy procedure rendered to be appealing technique for treatment of TMJ internal derangement.

References

1. McCain, J., Hossameldin, R., Srouji, S. and Maher, A., 2015. Arthroscopic Discopexy Is Effective in Managing Temporomandibular Joint Internal Derangement in Patients With Wilkes Stage II and III. *Journal of Oral and Maxillofacial Surgery*, 73(3), pp. 391–401.
2. Loureiro Sato, F. and Tralli, G., 2020. A new, simplified, arthroscopic technique to reposition and suture a displaced anterior disc in the temporomandibular joint. *British Journal of Oral and Maxillofacial Surgery*, 58(7), pp. 861–864.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 900**

Comparison of MRI Findings of Temporalis Myofascial Flap with Dermal Fat Graft as Interpositional Material in the Treatment of Temporomandibular Joint Ankylosis and to Determine It's Clinical Efficacy

*Dr. Bushra Sheikh**Goenka Research Institute of Dental Science***Abstract****Background**

Temporomandibular joint (TMJ) ankylosis is commonly associated with trauma, local/systemic disease, leading to hypomobility.

Aim

To compare clinical efficacy of temporalis myofascial flap and dermal fat graft as interpositional materials in treatment of TMJ ankylosis with MRI evaluation.

Methods

10 patients reporting to Department of Oral and Maxillofacial Surgery with TMJ ankylosis were randomized into 2 groups with 5 patients in each group. One group received temporalis myofascial flap and other group received dermal fat graft as interpositional material following osteoarthrectomy and gap arthroplasty and evaluated by MRI after 24 months. Clinical examination focused on maximum incisal opening (MIO).

Results and Conclusion

MRI results showed an increase in volume of fat graft and its potential to maintain vertical height of ramus; gap between osteotomy sites, giving it advantage over temporalis myofascial flap, where there is decrease in both volume and gap between osteotomy sites and dissecting temporalis muscle leads to scar contracture. Advantages of dermis-fat are:

1. Donor site in lateral thigh provides ample tissue to fill space in joint cavity.
2. Prevents direct contact between ramus and glenoid fossa.
3. Attached dermis keeps fat intact to prevent fragmentation.
4. Fat graft shows evidence of necrosis after 4 weeks & neo-adipogenesis after 7th week.

References

1. Su-Gwan K. Treatment of TMJ ankylosis with temporalis muscle and fascia flap. *Int J Oral Maxillofac Surg.*2001; 30:189–93.
2. Adekeye EO. Ankylosis of the mandible: Analysis of 76 cases. *J Oral Maxillofac Surg.*1983; 41: 442–9.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 907**

Application of TMJ Arthroscopy in Temporomandibular Joint Disorders

*Dr. Varsha Shankar**P.M.N.M Dental College and Hospital, Bagalkot***Abstract****Aim**

To present an overview of current uses of Temporomandibular joint arthroscopy.

Introduction

Successful management of patients with temporomandibular joint (TMJ) disorders requires great emphasis on reduction of joint load, inflammation, pain and enabling maximum interincisal mouth opening. Over the years many attempts at understanding the anatomy and dynamism of TMJ have lead to lineage towards joint arthroscopy as a modern day aid in visualizing, diagnosing and managing the disorders of TMJ. It provides a minimally invasive insight into the pathophysiology and prognosis of the disease as well as enables a comprehensive intervention of the pathology.

Background

Temporomandibular Joint arthroscopy is one of the most advanced and a minimally invasive technique involving optical instrumentation and prescribed surgical armamentarium, used for the treatment of the TMJ disorders. First introduced by Ohnishi in 1974, it has emerged as a modern diagnostic tool and now finds its application in the treatment of TMJ diseases as well. The advantage of this technique remains in direct visualization of all the anatomic regions inside the joint cavity for a definitive diagnosis, treatment, and predictable prognosis. Procedures such as joint lavage, lysis, disc plication, meniscectomy and condyloplasty can be done arthroscopically causing minimum damage to the joint anatomy and physiology. Though it requires expensive equipment, detailed operatory and skilled surgeon, yet it presents as a promising technique in modern day TMJ surgery.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 944**

Effect of Arthrocentesis in Patients with Internal Derangement of the Temporomandibular Joint

*Dr. Advaya Rath**Sri Guru Ram Das Institute of Dental Sciences and Research, Amritsar*

Abstract**Background**

Temporomandibular joint arthrocentesis was first introduced by Nitzan. Arthrocentesis by definition refers to the lavage of the joint space to release adhesions or anchored disc phenomenon and improve joint mobility.

Aim

To evaluate the effectiveness of arthrocentesis in the improvement of internal derangement of TMJ by injecting saline into the upper joint space.

Objectives

1. To achieve the increase in mouth opening and lateral movements.
2. To eliminate pain and noise in the TMJ.

Materials

A prospective, randomized study was conducted in the department of oral and maxillofacial surgery, M R Ambedkar Dental College, Bangalore. 10 patients above the age of 18 years with internal derangement of TMJ were studied for the study. All patients underwent Arthrocentesis of TMJ with saline and clinical evaluation of each patients was done before the procedure, immediately after the procedure, 1st, 3rd, 6th and 9th months post procedural.

Results

The evaluation of each patients done before the procedure, immediately after the procedure, 1st, 3rd, 6th and 9th months post procedural showed increased mouth opening, jaw function, lateral movements and function, while reducing TMJ pain and joint noise.

Conclusion

The result indicate arthrocentesis proved to be effective for the treatment of internal derangement of TMJ.

Reference

1. Singh S, Varghese D. Single puncture arthrocentesis of temporomandibular joint; introducing a novel device: A pilot study. *National Journal of Maxillofacial Surgery*. 2013 Jul;4(2):193.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 1104****Comparison of Custom vs. Stock Prosthesis for Total Temporomandibular Joint Reconstruction***Dr. Sakeena Azad**M R Ambedkar Dental College and Hospital***Abstract**

The primary reasons for TMJ reconstruction are ankylosis, developmental deformities, severe inflammatory joint disease or reconstructive procedure after tumor or trauma. Two systems are available: custom and stock device for TMJ reconstruction. Although these prostheses appear similar, subtle differences exist. Custom made devices have specific indications such as multiple operated cases, failed stock devices and severely degenerated, anatomically distorted TMJ. Stock devices are cost effective; whereas custom made devices are expensive. In stock devices the lack of posterior stop in the glenoid fossa component is the potential for infection and pressure-

related perforation to the auditory canal which seems to be the greatest disadvantage: whereas custom device has posterior stop in glenoid fossa which relieves the problem of displacement of condyle in posterior direction. The limitation of size in stock devices is an important factor in device selection, whereas custom device can be modify according to patient specific condition. The advantages of the custom devices in contrast to stock devices are that the system is virtually a perfect fit into the host bone, making it more predictable. Custom devices allow for change in anteroposterior and vertical dimensions, thus enabling changes to be made in the occlusion. However, long-term clinical and radiological studies on a larger sample size are imperative to establish the benefit of one over the other.

Reference

1. Brig S K Roy Chowdhury and Abhishek Mishra. “Alloplastic Temporomandibular Joint Reconstruction: An Additional Armamentarium for Maxillofacial Surgeon”. *Acta Scientific Dental Sciences* 2.8(2018):71–74.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 1207****Techniques of Exposure of Mandibular Condyle Using Retromandibular Approach***Dr. Harsh Rana**Goenka Research Institute of Dental Science***Abstract****Background**

Condylar fractures are the most common injuries of the mandible, because of their frequent complexity, several treatment options have been described for these fractures. When open reduction is indicated, extra-oral approach is complicated by the need to avoid injury to the facial nerve and intraoral approach is demanding technically, especially for high neck fractures. According to literature, the retromandibular approach will help to achieve faster rehabilitation of the patient while maintaining a better quality of life with minimal or no complications. There are three varieties of retromandibular approaches used to access the posterior mandible namely the trans-parotid, trans-massetric anteroparotid, retro-parotid exposures. They differ in the placement of the incision and the anatomic dissection to the mandible.

Aim

This poster will discuss and review the outcome of dealing with condylar fractures by three different surgical exposure techniques using the retromandibular approach and its modifications along with case reports.

Methods

Comparison will be based on review of incision site, anatomical landmarks, vital structures present and post-operative complications to conclude the most efficient method of fracture fixation.

Conclusion

As oral and maxillofacial surgeons, practicing good surgical principles to avoid vessel and nerve injury is important in selecting incision and approach for open reduction. Retromandibular anteroparotid approach has proven to be an extremely useful approach that provides good access, with minimal complications compared to retro-mandibular trans-parotid approach, whereas mini retro mandibular approach may minimise extraoral scar.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 1234****Use of Subdermal Fat Graft as an Interpositional Material in Temporomandibular Joint Ankylosis***Dr. Dhaya Ann Varghese, Dr. Ishwarya R.**KVG Dental College and Hospital***Abstract**

Temporomandibular joint ankylosis is a serious and disabling condition that may cause problems in mastication, speech, appearance and maintenance of oral hygiene. Ankylosis release is the oldest form of temporomandibular joint surgery. In spite of gap arthroplasties, literature showed high recurrence rates. In the current day practice, the gap arthroplasty with interpositional grafting has become the accepted standard for the surgical management of temporomandibular joint ankylosis. Out of the various interpositional grafts, the use of subdermal fat graft has been proved to be the safest and effective in the management of temporomandibular joint ankylosis. In this poster im going to present a case of bilateral TMJ ankylosis in which gap arthroplasty done by using sub dermal fat as interpositional graft material.

References

1. Dimitroulis G. The interpositional dermis-fat graft in the management of temporomandibular joint ankylosis. *International journal of oral and maxillofacial surgery*. 2004 Dec 1;33(8):755–60.
2. Dimitroulis G, Slavin J, Morrison W. Histological fate of abdominal dermis–fat grafts implanted in the temporomandibular joint of the rabbit following condylectomy. *International journal of oral and maxillofacial surgery*. 2011 Feb 1;40(2):177–83.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 1296****Custom Made Total Temporomandibular Joint Reconstruction***Dr. Kotipalli Manikanta**Drs. Sudha and Nageswara Rao Siddhartha Institute of Dental Sciences***Abstract**

Temporomandibular joint reconstruction (TMJr) presents unique problems because of the integral and complex roles this joint plays in establishing and maintaining proper form and function of the stomatognathic system. The TMJ not only acts as a secondary growth centre for the mandible in pre-pubescence, but it is also essential for the functions of mastication, speech, airway support, and deglutition. There are various conditions that necessitates TMJ reconstruction, most importantly, failed conservative management of ankylosis or restricted mouth opening due to degenerative or inflammatory joint disease, post traumatic condylar damage, painful and dysfunctional internal derangements. Recently, the temporomandibular joint has been reconstructed with a variety of alloplastic materials; Broadly speaking, two types of TMJr prostheses are available for reconstruction: (1) stock, and, (2) custom made prostheses. The custom-made TMJ-total joint replacement (TJR) devices provide stable, improved long-term results, thereby increasing the quality of life of the patient. The custom-made alloplastic TMJ-TJR prosthesis proves to be the optimal surgical procedure to reconstruct the TMJ in comparison to the autogenous grafts (to avoid complications) in severe degenerated and ankylosed joints. The purpose of this poster is to provide a brief overview of the basic principles and fundamentals of custom made TMJr.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery****Reg. Num.: 1297****Dynamic MRI interpretation of TMD***Dr. Yatin Rupareliya**Faculty of Dental Science, Dharmsinh Desai University***Abstract**

The temporomandibular joint (TMJ) is one of the important structures aiding in the opening and closing of the mouth. Temporomandibular disorders (TMD) refer to impaired functioning of the TMJ and frequently involve an abnormal disk-condyle relationship and pain. Magnetic resonance imaging (MRI) of TMJ is principally directed toward assessment of the soft-tissue abnormalities in terms of internal derangement. Dynamic MRI examination should be done as a routine examination of TMJ problems because static MRI usually skips detecting both the kinematic changes that affect the disc during function and asynchronous disc condyle movement. One limitation of the current dynamic techniques is that they are not truly dynamic. It uses devices or tongue blades to artificially open the mouth; hence the name pseudo-dynamic is more accurate. The first step is to evaluate the disk, its morphologic features, and its location in both closed- and open-mouth positions relative to the condyle. Other MR imaging signs that can suggest a diagnosis of TMJ dysfunction include thickening of an LPM attachment, rupture of retrodiskal layers, or joint effusion manifests as osteoarthritic changes such as condylar flattening or osteophytes. It is important to detect early MR imaging signs of TMJ dysfunction, thereby avoiding its evolution to this

advanced and irreversible phase characterized by osteoarthritic changes.

Reference

1. A J Hopfgartner et al., Dynamic MRI of the TMJ under physical load, *Dentomaxillofacial Radiology* (2013) 42, 20120436^a 2013.

Category: Student: E-Poster

Theme: TMJ Disorders and Surgery

Reg. Num.: 1298

Efficacy of Distraction First V/S Surgery First in TMJ Ankylosis

Dr. Harshadkumar J. Nakum

Abstract

The management of TMJ ankylosis requires restoration of anatomy, form, and function, occlusal stability, prevention of re-ankylosis and the airway space. Routinely Gap arthroplasty is performed in 1st stage to resolve the problem of limited mouth opening followed by distraction osteogenesis (DO) to prepare the patient for more complex operations in future. Surgeons also recommend DO as the initial treatment to restore the length and location of the mandible, and then the use of arthroplasty or TMJ reconstruction to recover the mouth opening as in cases of obstructive sleep apnea hypopnea syndrome (OSAHS). If TMJ ankylosis was released in the first stage, then the already diminished airway space would be further reduced due to the shortened mandibular ramus and postoperative oedema. However, there is still controversy over the sequence to be used when applying DO and arthroplasty to the treatment of TMJ ankylosis in patients with secondary deformities. This poster aims at therapeutic advantages and disadvantages of DO v/s Surgery as first stage of treatment in TMJ ankylosis and secondary deformities.

References

1. Zhang W, et al. The sequential treatment of temporomandibular joint ankylosis with secondary deformities by distraction osteogenesis and arthroplasty or TMJ reconstruction, *Int J Oral Maxillofac Surg* (2018).
2. Mehrotra D, et al. Pre-arthroplasty simultaneous maxillo-mandibular distraction osteogenesis for the correction of post-ankylosis dentofacial deformities, *Int J Oral Maxillofac Surg* (2016).

Category: Student: E-Poster

Theme: TMJ Disorders and Surgery

Reg. Num.: 1305

Primary Distraction Osteogenesis in Temporomandibular Joint Ankylosis

Dr. Nehal Chandgothia

Regional Dental College and Hospital

Abstract

Introduction

Temporomandibular joint (TMJ) ankylosis, a debilitating disease characterized by progressive restriction of mouth opening and maxillo-mandibular developmental deformities. TMJ ankylosis management by Arthroplasty alone fails to address the deformity. Distraction Osteogenesis offers a pragmatic solution to TMJ ankylosis. The purpose of this study is to evaluate the role of primary osteodistraction prior to ankylosis release in patients diagnosed with facial asymmetry secondary to temporomandibular joint ankylosis.

Method

Three patients in the age group of 5–23 years with unilateral TMJ ankylosis underwent primary osteodistraction (Stage I) for mandibular advancement. Intraoral monoplanar distractor placed to increase both the ramus height and body length. They were evaluated pre and post-operatively using radiographs and over-correction was achieved with satisfactory outcome. Gap Arthroplasty (Stage II) was performed and the patient was under regular follow-up.

Results

All patients had TMJ ankylosis secondary to trauma. The amount of distraction done ranged from 2 to 3 cm. The ramus height and length of the body of the mandible were achieved in all cases. Facial asymmetry was corrected. Active and passive mouth opening was recorded postoperatively.

Conclusion

Primary distraction osteogenesis gains posterior stop which allows distraction against a stable fixed point, such that a true distraction of mandible occurs in the desired direction with better vector control. Thus pre-arthroplastic distraction osteogenesis appears to be best to correct mandibular deformity and facial asymmetry in patients with TMJ Ankylosis.

References

1. Dharmendra Kumar MG., Role of extra oral monofocal distractor device in the correction of the facial asymmetry, sleep apnoea, and quality of life associated with TMJ ankylosis. *J Stomatol Oral Maxillofac Surg* (2018)
2. Sadakhh AA, Elgazzar RF, Abdelhady AI. Intraoral distraction osteogenesis for correction of facial deformities following temporomandibular joint ankylosis: a modified technique. *Int J Oral Maxillofac Surg* 2006; 35(5): 399–406

Category: Student: E-Poster

Theme: TMJ Disorders and Surgery

Reg. Num.: 1337

A comparative study to evaluate intra-articular injection of i-PRF vs PRP in the management of TMDs

Dr. Sakthisri V.

Karpaga Vinayaga Institute of Dental Sciences

Abstract**Background**

Temporomandibular joint disorders (TMDs) affect the jaw joints and related structures and include painful myofascial problems, internal derangement of joint space, abnormalities of bony components and degenerative and rheumatologic problems.

Aims/Objectives

The aim of the study is to evaluate the efficacy of intra-articular injection of i-PRF versus PRP in TMDs.

Materials and Methods

This prospective study was conducted on patients suffering from TMDs. Patients were selected randomly into 2 groups each had 7 patients (14 joints), where group 1 received intra-articular PRP injection and group 2 received intra-articular i-PRF injection. Pain was evaluated by recording it on a psychometric response scale the Visual Analog Scale and, mouth opening was evaluated using More Rao Scale.

Results

There was a statistically significant ($p < 0.05$) reduction in pain and improvement in mouth opening using PRP and i-PRF in the management of TMD with better results in group 2 (i-PRF).

Conclusion

PRP and i-PRF injections are regarded as simple and safe method with potential beneficial effects and are cost effective. Comparison of

intra articular injection of i-PRF versus i-PRP provided encouraging results in TMDs.

Category: Student: E-Poster**Theme: TMJ Disorders and Surgery**

Reg. Num.: 1391

Dr. Vasundhara Kumar

Saraswati Dental College, Lucknow

Abstract

XXXX

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.