

Bumps over cheeks

Hatice Tuba Sanal · Kemal Hasanov · Nebi Caferov ·
Lina Chen

Published online: 3 July 2013
© ISS 2013

Answer

Gardner syndrome is an inherited autosomal dominant disorder [1]. The disease spectrum consists mainly of (i) adenomatous polyps of the gastrointestinal tract, (ii) multiple osteomas, (iii) skin and soft tissue tumors including epidermoid cysts and desmoid tumors [2] (Figs. 1 and 2).

Osteomas arise from the surface of bone and may range in appearance from mild thickenings of the cortex to large masses in the bone, including the skull [1]. Dental abnormalities include impacted or un-erupted teeth, congenitally missing teeth, and supernumerary teeth that may be observed secondary to centrally located osteomas of the mandible present near the roots of the teeth [1, 2]. Lobulated type of osteomas can be large and arise from the cortex most commonly observed at the mandibular angle causing bumps, as seen in this case [1].

Early detection of Gardner syndrome is important because patients can develop malignant transformation of their colonic polyps [1, 3]. The maxillofacial features of the syndrome can precede the development of colonic adenocarcinoma, so it is essential for radiologists to be familiar with the imaging features of Gardner syndrome [3]. The presence of multiple osteomas (more than three) of the skull and abnormal dental

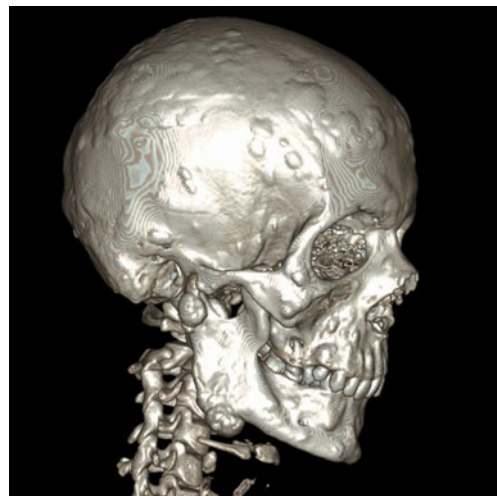


Fig. 1 3D surface-rendered image demonstrating multiple osteomas of the skull and maxillofacial bones. Note the large osteomas in the angle and condyle of the right mandible



Fig. 2 Osteomas of the wall of the ethmoid sinus are seen with their hyperdense and confluent appearance

The case presentation can be found at doi: 10.1007/s00256-013-1678-4

H. T. Sanal · K. Hasanov · N. Caferov
Gulhane Military Medical Academy, Medical Faculty, Department
of Radiology, Ankara, Turkey 06018

L. Chen
University of Maryland School of Medicine, 22 South Greene
Street, Baltimore, MD 21201, USA

H. T. Sanal (✉)
Gulhane Military Medical Academy, Gn. Tevfik Saglam Cad,
06018, Kecioren Ankara, Turkey
e-mail: tubasanal@gmail.com

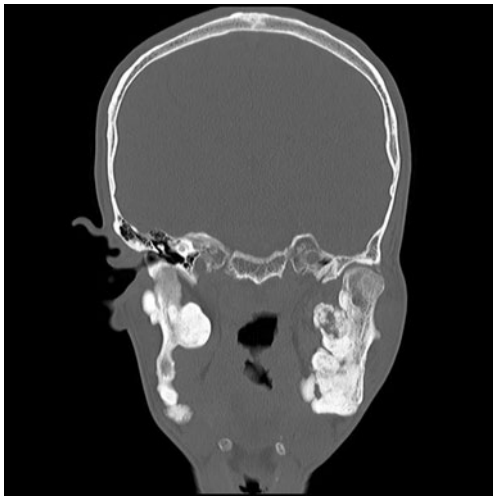


Fig. 3 Large lobulated osteomas displacing parapharyngeal soft tissues

findings should alert the clinician to further investigate the possibility of this pre-cancerous condition [3].

Osteomas of the mandible and maxilla along with resultant supernumerary and impacted teeth can be detected in routine

panoramic radiograph [3]. CT provides better delineation of the details and extension of the osteomas of the skull and facial bones. Diagnosis of Gardner syndrome necessitates further genetic counseling and close surveillance for malignancies [2]. Osteomas may require excision if they are severely deforming, interfere with daily function, or cause compression of adjacent vital structures Fig. 3.

Conflict of interest The authors have no conflicts of interest to disclose.

References

1. Cankaya AB, Erdem MA, Isler SC, Cifter M, Olgac V, Kasapoglu C, et al. Oral and maxillofacial considerations in Gardner's syndrome. *Int J Med Sci.* 2012;9:137–41.
2. Madani M, Madani F. Gardner's syndrome presenting with dental complaints. *Arch Iranian Med.* 2007;10:535–9.
3. Fonseca LC, Kodama NK, Nunes FCF, Maciel PH, Fonseca FA, Roitberg M, et al. Radiographic assessment of Gardner's syndrome. *Dentomaxillofacial Radiol.* 2007;36:121–4.