Fundamentals of Maxillofacial Surgery

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Preface

The development of a knowledge base is a gradual process; mastery of a subject demands much time and energy. In the course of their education, young surgeons are exposed to many facts in their reading and in discussions with peers. Their assimilation and integration of this factual material is later tested by objective means in the operating room.

This book is designed to give a comprehensive review of maxillofacial surgery from many perspectives, such as anatomy and embryology, it is not intended to be a research base. The facts are brought together in a progressively developed text that is designed to help the reader understand many, but certainly not all, of the principles of maxillofacial surgery.

Entitled the *Fundamentals of Maxillofacial Surgery*, it brings together information on a multitude of subjects, all of which deal with different facets of maxillofacial surgery. Although this material appears throughout the literature, this is the only book in which these topics are brought together. The book begins with the embryology and anatomy of the head, neck, and craniofacial regions. It is necessary to understand the normal anatomy of these regions in order to correct the anatomy that presents abnormal shapes, positions, and incomplete development. The next two chapters, odontogenesis and oral anatomy, cover topics that are absent or inadequately taught in the medical school curriculum. To deal with the jaws and their associated teeth, a knowledge of the basics of dental anatomy is imperative. Unfortunately, students cannot apply the basics of anatomy until they are in a clinical setting. The use of some of the dental anatomy discussed is therefore applied in the chapter on "Local Anesthesia and Infiltration Techniques" and in other chapters dealing with the teeth and their position in the masticatory apparatus.

Chapters 8 through 12 examine the evaluation and treatment of maxillofacial trauma. This portion of text deals with the basic tenets in the treatment of facial fractures in adults and children. The techniques of wiring made popular by Milton Adams, MD in the 1940s and the use of Ivy loops, Gilmer wire, and the continuous stout wire ligature techniques are presented. We are aware that many of these techniques are now of historical importance only. But, knowledge of past techniques may sometimes help us to deal with a problem that more up-to-date techniques of plates and screws cannot solve. A general discussion of the facial trauma patient is also presented with a thorough, but by no means complete, discussion of the treatment of maxillary mandibular and mid-facial fractures. It is hoped that with this information, readers will be able to treat most of the cases of maxillofacial trauma to which they will be exposed.

Chapters 13 through 21 discuss the evaluation of treatment of the patient with certain orthognathic and temporomandibular joint surgical problems. These chapters are designed to present methods of case assessment and treatment planning, but do not represent the only—or even, in some cases, the most widely used—treatment plans or cephalometric evaluation techniques. These chapters provide a guide to tried-and-true operative techniques that should help the reader appropriately deal with the patient's problems and needs. These chapters do not offer an exhaustive treatise on all known techniques. Rather, they offer the knowledge of the particular authors and their individual experiences in the field of maxillofacial-orthognathic surgery. As such, these chapters reflect each author's built-in biases and prejudices.

The final two chapters deal with the materials necessary to set up an office dental laboratory for the surgeon specializing in this area. It also discusses the techniques necessary to take impressions, pour models, and place finished models on the articulator. This is followed by a discussion in the construction of acrylic splints, with the use of clinical examples where necessary. Chapter 23 shows how splints can be an aid in the treatment of fractures and orthognathic surgical cases when used with the more modern techniques of rigid fixation.

Finally, I would like to thank all of my contributing authors for their efforts in this enormous undertaking. In particular, I would like to thank Dr. Irving Polayes, for without his pioneering efforts this book could never have been written. It is my hope that the *Fundamentals of Maxillofacial Surgery* will help my medical colleagues deal effectively with this area of surgical correction.

James W. Ferraro

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