

# ORAL SURGERY

A sampling of topics discussed includes:

- Preoperative Evaluation of the Oral Surgery Patient
- Pain and Pain Control
- Impacted Teeth
- Complications in Oral Surgery
- Hemorrhage in Oral Surgery
- Infections of the Maxillofacial Region
- Preprosthetic Surgery
- Maxillofacial Trauma
- Cysts of Bone and Soft Tissue
- Diseases of the Salivary Glands
- Orthognathic Surgery
- Surgical Diseases of Bone
- Hospital Dentistry

*Edited by*

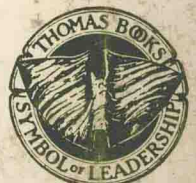
**JAMES R. HAYWARD, D.D.S., M.S.**

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School of Dentistry  
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Co-Director, Cleft Palate Program  
University of Michigan  
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This unique monograph on oral surgery fills the gap between clinical and basic scientific findings and permits rational treatment of oral surgery in greater depth. The editor and contributors — all recognized leaders in the field — present current ideas in the area of oral surgery and exodontia. Some of the conditions discussed are part of the dental practitioner's daily practice while others should be recognized and appropriately referred for care.

The general dentist is provided, in this text, with new procedures, original research and advances in clinical appraisals of oral surgery in contemporary dentistry. The diagnosis, treatment planning, and solution of a variety of problems for which there may be oral surgical correction are covered thoroughly. Its modernity and comprehensiveness will make this work invaluable to all dental students and practitioners.

*American Lecture Series®*



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# ORAL SURGERY

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*A Monograph in*  
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*Edited by*  
ALVIN F. GARDNER, D.D.S., M.S., Ph.D.\*

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*This volume is dedicated to:*

*Robert B. Shira  
Oral Surgeon, Educator, and Leader  
of the Dental Profession*

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# FOREWORD

THE *American Lectures in Dentistry* series advances newer knowledge for progress of dental practice. Success in modern dental practice is dependent upon biologic as well as mechanical considerations. The interdependence of dentistry on oral biology is so great that dentists are turning to oral biologists and oral biologists to dentists in order to understand the local and systemic basis of oral disease. The oral biologic processes are currently becoming sound foundations for clinical dentistry resulting in a rather rapid extension of postgraduate instruction. Therefore, each of the books in this series unravels the oral mechanisms and provides the clinical management of many problems which have existed for decades.

The *American Lectures in Dentistry* series is charged with a striving ardor of dental wisdom, prepared by distinguished dental colleagues. Dentistry is both a science and an art which fulfills a social function. This series will, therefore, encompass clinical, oral biologic, and social topics which are most applicable to the general practitioner of dentistry. It is our hope that the efforts of the contributors will assist the dental practitioner in fulfilling his responsibility to his patients through sound judgments, proper technical knowledge, and dispatch. The *American Lectures in Dentistry* will serve as extremely practical references to aid the dental practitioner to resolve some of the problems encountered in the practice of dentistry as well as to broaden the horizons of those progressive dentists who desire the postgraduate knowledge and continuing education presented in this series. Contributors will focus attention on these aspects of dental practice causing the general practitioner the greatest concern and difficulty.

The contributors of this series will help the practicing dentist to meet the challenges of the various phases of dental practice. Their observations should be beneficial to dentists seeking to attain the best possible treatment for their patients. New oral diagnostic problems, techniques, instrumentation and therapeutic measures are emerging. It is hoped that a tradition will develop whereby the *American Lectures in Dentistry* serves the dental practitioner and dental specialist alike.

It is not humanly possible to assimilate all of the knowledge in dental school that will be needed for the practice of dentistry. In addition, new knowledge is increasing at a rapid rate. Therefore, the dental practitioner can only keep abreast of the times by showing an initiative for self-learning. It is our hope that the *American Lectures in Dentistry* will stimulate the inquiring mind and provide the dental practitioner with a foundation in basic and new knowledge, skills and attitudes of dentistry upon which he can prepare himself for dental practice in current and future years.

The modern-day dental practitioner is in need of every opportunity possible to extend his knowledge and clinical experience. It is the purpose of the *American Lectures in Dentistry* series to represent one kind of continuing education which will be readily available to him. The *American Lectures in Dentistry* series

places emphasis upon the fact that dental knowledge is not a rigid, fully elaborated system of facts, but rather one that is dynamic and constantly changing as new facets of knowledge are developed into the mosaic pattern of the whole.

Dr. James R. Hayward, Professor and Chairman of the Department of Oral Surgery, University of Michigan School of Dentistry; Director, Oral Surgery Program at University of Michigan Medical Center; and Co-Director, University Hospital Cleft Palate Program, presents this very unique volume on oral surgery for general practitioners throughout the United States and Canada. Dr. Hayward and his distinguished contributors provide the general practitioner of dentistry with new procedures, original research, and advances in clinical appraisals of oral surgery in modern day dentistry. I believe that the readers of this volume will conclude that the editor and contributors have collectively enlightened dental practitioners on the oral surgery concepts that have been dealt with and that they have accomplished what we set out to do in this series.

While more voluminous textbooks can provide a basic introduction to the dental student to oral surgery, their sheer size and infrequent publication leaves the continuing education of general practitioners several years behind rapidly developing areas of oral surgery. This monograph on oral surgery, therefore, fills the gap between clinical and basic science findings and permits rational treatment of oral surgery in greater depth. The editor and contributors record activity in the field of oral surgery and exodontia which are a part of the dental practitioner's daily practice and some which he should recognize and appropriately refer for care. It is in this spirit that the editor and contributors have approached the preparation of this book.

It is gratifying to record my warm personal thanks to the editor and to those who contributed chapters to this excellent volume. May it help all dental practitioners to meet their professional responsibilities in the daily treatment of their patients.

ALVIN F. GARDNER

# PREFACE

WITHIN THE SCOPE of modern dentistry, the individual practitioner can master and perform only a fraction of the broad knowledge and skills offered by the profession. In delivering that fractional portion of health care with competence, however, the individual can fulfill a personal and professional mission with satisfaction. The broad field of oral surgery requires the services of both generalists and specialists. Every general dentist should understand and recognize those surgical problems of the oral-facial region to a degree that he will see the indication for treatment and either treat or appropriately refer the patient. In his awareness of total health, to the extent that he is able to detect signs and symptoms of medical problems, the dentist can direct patients for needed general health care. While appraising the patient's local problem and general health and during treatment, the dentist and his office staff must be prepared for unexpected, life-threatening, and accidental events.

A universal definition of oral surgery is "the division of health care that is devoted to the surgical correction of disease, injury, and malformations of the mouth, jaws, and associated structures." Within oral surgery, there is a range from emergency treatment of trauma and infection through urgent elimination of abnormal diseased tissue to the more elective correction of maxillofacial malformation. Throughout the problems in this spectrum, the guidelines for surgical therapy remain (1) a sound diagnosis and treatment plan with concern for both the local condition and the total patient, utilizing appropriate consultation and referral, (2) competence for the surgical procedure through applied knowledge and trained skill, and (3) preparation for emergencies, complications, or any threat to the safety of the patient during the preoperative, intraoperative, or postoperative treatment.

The principles of surgical approach are standardized. Improvements in this skill needed for the repair of injuries or in the elimination of pathology are gained chiefly through greater precision and less trauma in the manipulation of tissues. Better operations and methods evolve slowly. However, in the surgical correction of deformities, there are exciting new horizons to stimulate ingenuity for innovative procedures and techniques. Frontiers of surgery have been extended by more effective accurate diagnosis, by better control of pain and anxiety, and by improved technical proficiency. With these expanding frontiers, it is possible to correct many conditions which formerly were thought to be unchangeable.

Although the changes effected by surgical procedures are rapid and the experience for the patient is brief, there is a natural, and almost reflexive, patient appreciation when a dreaded experience has been converted to one that is simple and easy. Such natural appreciation is a great satisfaction in clinical practice of oral surgery.

The sections of this text are intended to be helpful in the diagnosis, treatment planning, and solution of a variety of problems for which there may be oral surgical correction.

JAMES R. HAYWARD

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J.R.H.

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# ORAL SURGERY





## Chapter 1

# PREOPERATIVE EVALUATION OF THE ORAL SURGERY PATIENT

STANLEY KENNETT

**P**HYSICAL DIAGNOSIS at the time of oral surgery is of utmost importance to the overall welfare of the patient. It has been well established that complications, morbidity, and even mortality are avoided or reduced if the dental practitioner will thoroughly assess the health status of his patient. The objective of the evaluation itself is not necessarily to arrive at a definitive medical diagnosis, but to determine whether the patient's physical and mental status will enable him to tolerate a specific procedure with safety.

The evaluation in many instances has a direct bearing on the treatment plan which may have to be modified for the high risk patient. A good example of this is in pre-prosthetic surgery, which by its nature often is carried out for patients in an older age group where cardiorespiratory function may be poor. The ideal operation may require major oral surgery to obtain the best possible result, but this may have to be modified to a less stressful compromise procedure.

In many instances, close cooperation and consultation with the patient's physician is necessary. The dentist should not discontinue drug therapy, alter dosages, or

change the patient's medical regimen unless the physician is first consulted. However, it is important for the dentist to realize that he is ultimately responsible for any complications that may result from his dental procedure despite the communication with the physician.

It is proposed to consider this general subject under two main headings:

1. Evaluating the Patient
2. Systemic Diseases Affecting Oral Surgery

## PATIENT EVALUATION

### Medical History

A good medical history is the single most important step in the assessment of the patient. A valuable preliminary aid is the Health Questionnaire. This should be simple and short since patients tend to be rather careless when confronted with long detailed forms. Since an evaluation and not a diagnosis is required, lengthy questionnaires are not necessary. Table 1-I presents an example of a suggested short form.

It is helpful to review the questionnaire with the patient to obtain further details on any health conditions and current medications. Particular importance should be given to the cardiovascular and respiratory systems since these have the greatest bearing on ability to withstand the stress of anesthesia and the oral surgery. Although by no means comprehensive, the following questions are useful:

1. "Do you suffer from shortness of breath (dyspnea)?" The degree of dyspnea may be evaluated by determining whether normal activities such as shopping or walking up a flight of stairs are managed without becoming short of breath. If other points also are negative, this signifies a good functional capacity. If the patient