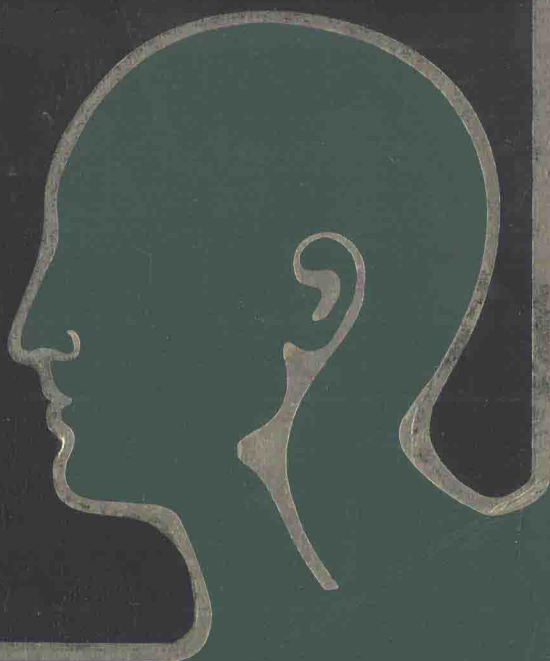


ESSENTIALS OF OTOLARYNGOLOGY

Frank E. Lucente

Steven M. Sobol



Raven Press

Essentials of Otolaryngology

Frank E. Lucente, M.D.

Associate Professor

*Department of Otolaryngology
Mount Sinai School of Medicine
New York, New York*

Director

*Department of Otolaryngology
City Hospital Center
at Elmhurst*

Elmhurst, New York

1. Otorhinolaryngology

Steven M. Sobol, M.D.

Associate Professor

Department of Otolaryngology-

Head and Neck Surgery

University of Oklahoma

Health Sciences Center

Oklahoma City, Oklaho

**Raven Press, 1140 Avenue of the Americas,
New York, New York 10036**

© 1983 by Raven Press Books, Ltd. All rights reserved. This book is protected by copyright. No part of it may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

Made in the United States of America

Library of Congress Cataloging in Publication Data

Lucente, Frank E.

Essentials of otolaryngology.

Bibliography.

Includes index.

1. Otolaryngology. I. Sobol, Steven M. II. Title.

RF46.L83 1983 617'.51 81-40547

ISBN 0-89004-714-6

The material contained in this volume was submitted as previously unpublished material, except in the instances in which credit has been given to the source from which some of the illustrative material was derived.

Great care has been taken to maintain the accuracy of the information contained in the volume. However, Raven Press cannot be held responsible for errors or for any consequences arising from the use of the information contained herein.

ESSENTIALS
OF
OTOLARYNGOLOGY

Preface

An understanding of otolaryngologic disorders is essential to the practice of medicine and to the competent delivery of total patient care. Symptoms referable to the head-and-neck region are ubiquitous in clinical medicine and include such varied complaints as headache, dizziness, nasal stuffiness, throat pain, hearing loss, dysphagia and facial pain.

In view of the plethora of head-and-neck complaints, it is incumbent on all practitioners to become conversant with methods of taking an appropriate history and performing a physical examination of this region, as well as understanding the differential diagnosis of major complaints in this region. For that reason, this book is organized around a symptom-oriented approach after the preliminary chapters on anatomy, physiology, history-taking and physical examination.

Presentation of guidelines for the treatment of the disorders discussed poses another problem. The extraordinary growth of the field of otolaryngology during the past 40 to 50 years confounds the educator who attempts to present a concise, comprehensive and contemporary overview of therapy to the nonotolaryngologist. Therefore, we have limited the therapeutic recommendations in this book and encourage the reader to consult with practitioners in his school or community.

Different readers may wish to use this book in various ways. We recommend that medical students consider the suggestions on page xv in using the book during their clinical rotations. Other readers, especially experienced practitioners, may wish to go directly to the symptom-oriented chapters for information about a particular problem. However, we would urge them to review the material discussed in the first four chapters in conjunction with their use of the remainder of the book. For all readers we would like to propose the following goals in using this book:

1. Understand the anatomy and physiology of the head and neck region.
2. Understand the gamut of pathologic problems in this region.
3. Learn to take a thorough history and perform a complete examination of patients who present with otolaryngologic complaints.
4. Learn the techniques for treating common disorders in this region and the indications for referral to an otolaryngologists.
5. Understand the interactions of otolaryngology with other specialties dealing with disorders in this region.

Finally, we encourage all who use this book to be ready to incorporate new information from other sources and to be prepared to challenge all assertions in this changing field. It is only with the attitudes of inquisitiveness, perseverance and vigilance that one can be prepared to cope with the dynamic field of otolaryngology.

Frank E. Lucente, M.D.
Steven M. Sobol, M.D.

Acknowledgments

Peer review is one of the most crucial elements in the production of a contemporary medical textbook. We were fortunate to have the advice and assistance of the following colleagues who critically reviewed the entire manuscript and made numerous suggestions for improvement: Nicholas L. Schenck, MD, David R. Edelstein, MD, Kenneth A. Remsen, MD, and Joseph W. Giebfried, MD. Many of our medical students also reviewed sections of the book to help determine if it meets their needs.

We would also like to acknowledge our teachers and coworkers who have contributed to our understanding of otolaryngology and who by their example have fostered an interest in teaching the student and primary care practitioner the best standards of contemporary care. They include Joseph H. Ogura, MD, John A. Kirchner, MD, Hugh F. Biller, MD, Harvey M. Tucker, MD, Samuel E. Kinney, MD, J. Gail Neely, MD, William Lawson, MD, DDS, Simon C. Parisier, MD, and Ben H. Senturia, MD.

Scott M. Kessler, MD, produced the elegant new line drawings. Kenneth A. Remsen, MD, Judith Jay, MD, Patrick G. McMenamin, MD, B. Todd Schaeffer, MD, David R. Edelstein, MD, Kathy Vrankovic, and Dorothy Hughes assisted with photography.

The audiology section was prepared by David J. Minear, PhD, Patricia Chute, MA, Debra Fried, MS, and Sharon Kramer, MS.

We extend a special thanks to Janet Brim who patiently typed and retyped the manuscript. Additional secretarial assistance was provided by Anita L. Finch, Michele A. McGowan, Gloria Minet-Johnson, Brigitte Hirschfeld-Bodenheimer, and Stephen Saikin.

We appreciate the courtesy of numerous authors and publishers who generously allowed us to reproduce charts, tables, and other material from their publications.

Dr. Diana Schneider, Susan Meigs, Betty Jean Hesse, Rita Scheman, Kathy Scheuermann and other members of the capable staff of Raven Press have been extraordinarily helpful in all phases of production of the book. Without their encouragement and persistence, the book would not have been possible.

Finally, we must acknowledge the subtle contribution of our patients, who continue to teach us in daily clinical practice and who stimulate our attempt to share these lessons with our students and fellow physicians.

Contributors

The authors gratefully acknowledge our colleagues who contributed significantly to the following chapters:

Leon A. Assael, DMD	Headache and Facial Pain Bony Facial Trauma
William C. Donlon, DMD	Headache and Facial Pain
David R. Edelstein, MD	Dysphagia
Scott D. Gold, MD	Chronic Hearing Loss
Robert P. Green, MD	Tinnitus
Alan L. Jacobson, MD	Headache and Facial Pain
Judith Jay, MD	Bony Facial Trauma
Robert L. Pincus, MD	Ear Drainage
Kenneth A. Remsen, MD	Salivary Gland Enlargement
Abraham I. Sinnreich, MD	Disorders of Smell Disorders of Tongue and Oral Cavity
Marc I. Surkin, MD	Facial Paralysis
Verne M. Weisberg, MD	Disorders of Tongue and Oral Cavity

Medical students who use this book in conjunction with a 1 to 2 week rotation in otolaryngology are advised to consider the following schedule:

- 1) Before the rotation begins, read Chapters 1 through 4.
- 2) During the rotation, read each chapter relevant to clinical problems encountered. Consult the recommended references along with suggestions for further reading.
- 3) At the midpoint in the rotation, identify chapters relevant to problems not yet encountered and read these chapters.
- 4) At the end of the rotation, reread Chapter 2 and correlate the basic anatomy and physiology with the clinical experiences.

Other students, primary care practitioners and other physicians should also read the first four chapters carefully before starting the symptom-oriented chapters. They will provide the fundamental information about anatomy, physiology, history-taking and physical examination upon which the subsequent chapters are based. A periodic review of Chapter 2 is also helpful.

Contents

1	Introduction	1
2	Anatomy and Physiology	3
3	Medical History	44
4	Physical Examination	46
5	Chronic Hearing Loss	71
6	Sudden Hearing Loss	84
7	Ear Pain	89
8	Ear Drainage	98
9	Bleeding from the Ear	104
10	Itching of the Ear	107
11	Foreign Body in the Ear	110
12	Tinnitus	113
13	Dizziness and Vertigo	118
14	Facial Paralysis	127
15	Headache and Facial Pain	135

16	Nasal Congestion, Obstruction, and Drainage	149
17	Epistaxis	163
18	Nasal Foreign Body	171
19	Disorders of Smell	173
20	Disorders of the Tongue and Oral Cavity	177
21	Disorders of Taste	185
22	Bad Breath	189
23	Salivary Gland Enlargement	192
24	Throat Pain	199
25	Dysphagia	208
26	Hoarseness and Voice Change	220
27	Upper Airway Obstruction	232
28	Tonsillectomy and Adenoidectomy	248
29	Cough	254
30	Hemoptysis	259
31	Neck Masses	264

32	Thyroid Masses	277
33	Bony Facial Trauma	283
34	Soft-Tissue Injuries	293
35	Ear Trauma	297
36	Cosmetic Deformities of the Facial Region	300
37	Psychological Aspects of Otolaryngologic Disorders	305
38	Cancer of the Head and Neck	309
	Appendix	317
	Audiology	319
	Drugs of choice according to infecting organism	329
	Antibiotics of choice according to clinical diagnosis	332
	Antibiotic dosages by drug class	334
	Commonly used antihistamine and decongestant preparations	336
	Selected topical otic preparations	338
	Suggestions for Further Reading	339
	Subject Index	341

Introduction

Otolaryngology is a regional specialty involving medicine and surgery of the head and neck. The otolaryngologist-head and neck surgeon deals with problems in the many subspecialties of this field, including otology, rhinology, allergy, neurotology, laryngology, bronchoesophagology, head and neck surgery, and facial plastic and reconstructive surgery. The breadth of this field and the complexity of the problems encountered can make the initial contact with this field an intimidating experience. In an attempt to provide recommendations for the diagnosis and treatment of patients who present with problems in the head and neck region, we have prepared this symptom-oriented handbook for use especially by medical students and primary care practitioners.

A symptom-oriented approach has been chosen in order to present a consistent approach to each patient. The major symptoms that bring patients to the otolaryngologist are discussed. Because many otolaryngologic complaints can be resolved on the basis of an understanding of the structure and function of the head and neck, an extensive review of the anatomy and physiology of this region is provided. In addition, we have provided numerous references and a listing of many standard textbooks and commonly used journals for further reading.

This handbook is not intended to replace the excellent texts listed in the bibliography nor is it a substitute for the liberal use of larger books. However, the pocket-sized format of the book will facilitate its use in daily clinical work.

The reader should not interpret the therapeutic recommendations in this manual as dictums. Since therapy will be determined and prescribed by members of the attending and resident staff at each hospital, the emphasis here is on an organized approach to patients with otolaryngologic complaints rather than on therapy. Never-

theless, general recommendations regarding treatment of common complaints are given.

We hope that this handbook will help medical students make optimal use of their time in a brief rotation in otolaryngology and that it will assist the primary care practitioners and other non-otolaryngologists in their approach to these patients and in selecting those who need referral to the otolaryngologist for further care.

We have exerted every effort to ensure that medical and surgical procedures and drug indications and dosages set forth in this handbook are in accord with standard practices at the time of publication. However, in view of ongoing clinical and fundamental research, changes in governmental regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to consult other sources (see Bibliography and Other Reading) and the package insert for each pharmaceutical preparation for any change in indications or dosage and for added warnings and precautions as approved by the U.S. Food and Drug Administration. This is particularly important when the recommended procedure or agent is new or infrequently employed.

Finally, we would like to acknowledge that during the past several years otolaryngologists have adopted the professional designation "otolaryngology-head and neck surgery" as a more appropriate indication of the breadth of the specialty. These changes have been fostered by the organizations formerly known as the American Academy of Otolaryngology and the American Council of Otolaryngology, which are largely representative of the members of the specialty. These two organizations are now joined as the American Academy of Otolaryngology-Head and Neck Surgery. In this handbook, we have chosen not to append the term head-and-neck surgery to each use of the words otolaryngology or otolaryngologist. This is not meant to reduce the importance of this aspect of the specialty but is done merely for the sake of simplicity.

Anatomy and Physiology

In order to understand the signs and symptoms of disorders that affect the head and neck region, one should be familiar with the normal anatomy and physiology of this area. This chapter will provide a relatively concise review and discussion of those aspects most critical in exploring the pathophysiology of otolaryngologic disorders. It is not intended to replace major comprehensive anatomy and physiology textbooks but merely to offer a conceptual framework as a quick and handy reference.

THE EAR

ANATOMY

External Ear

The external ear consists of the auricle and the external auditory canal. Except for the lobule, the entire auricle is composed of elastic cartilage and skin (Fig. 2.1). This skin is thin and densely adherent in the front and more loosely attached behind. The auricle is attached to the head by the external auditory canal and several small muscles that are innervated by the facial nerve.

The external auditory canal (Fig. 2.2) is cartilaginous in the lateral half and bony in the inner half. The skin lining the cartilaginous portion contains hair follicles, sebaceous glands, and ceruminous glands. The cartilage of the canal is continuous with that of the auricle. Small dehiscences within this cartilage anteriorly (fissures of Santorini) provide potential pathways for the spread of tumor and infection from the canal into the parotid gland. The skin lining the bony portion of the canal is extremely thin and continuous with the external epithelial layer of the tympanic membrane.

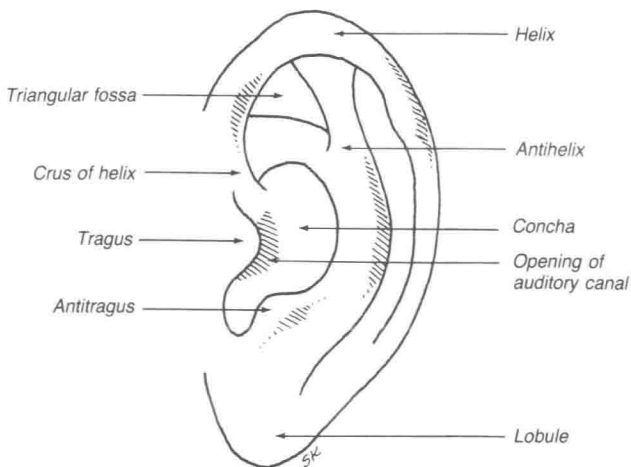


FIG. 2.1. Lateral view of auricle.

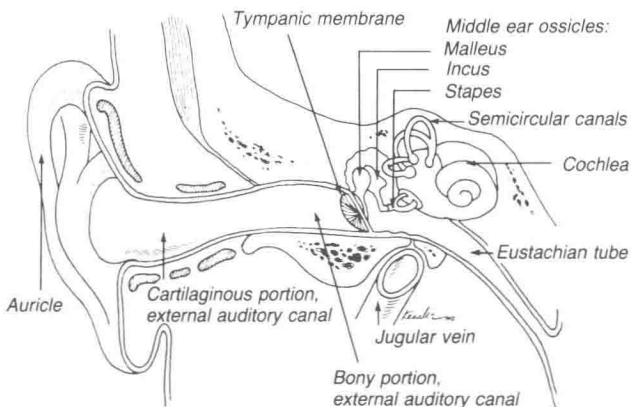


FIG. 2.2. Coronal section of ear.