Office-Based Laryngeal Surgery

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To Sawsan, Aya, Adam, and Jad Hamdan

To Dahlia, Ben, and John
Sataloff, and Shyam Akula

To Luke James Kilcur

Preface

Advances in technology and instrumentation during the last few decades have improved the precision, case, and popularity of office-based laryngeal surgery. In-office surgery of the larynx has been performed with increasing frequency throughout the world. In patients who have been selected correctly, office-based surgery may provide several advantages over MicroDirect laryngoscopy in the operating room. These include eliminating the risks of general anesthesia, hastening the time from diagnosis to receipt of biopsy results, decreasing health care costs, and other benefits. However, in-office surgery requires expertise, informed patient selection, adequate instrumentation, patient education, and office staff training in order to be performed safely and effectively.

This book is intended to provide otolaryngologists with the information necessary to perform office-based surgery of the larynx appropriately. Much of the information may be known to laryngologists who already perform such procedures; however, many other otolaryngologists could add office-based laryngeal surgery to their practices, thereby offering a valuable option for selected patients. The authors discuss core knowledge essential to laryngeal surgeons, administration of topical anesthesia in an office setting, patient counseling and selection, techniques of various procedures, and other topics that we believe will be helpful for physicians who perform office-based laryngeal surgery.

The first four chapters provide core knowledge helpful in understanding voice disorders and are essential for accurate diagnosis, surgical patient selection, and understanding modern surgical techniques. They are modified with permission from prior publications by the author (RTS). This core information also has been included in the authors' prior books published by Springer for the convenience of our readers, and because mastery of these topics is critical to understanding voice and other laryngeal disorders and to providing optimal treatment. Chapter 1 provides a focused, brief review of the anatomy and physiology of phonation. This information is essential not only in helping to understand and establish diagnoses of laryngeal disorders but also to understand the precision required to achieve optimal outcomes with laryngeal surgery, whether it is performed in the operating room or in the office. Chapters 2 and 3 review the comprehensive medical evaluation (history and

physical examination) performed for patients with voice complaints. Chapter 4, written in collaboration with Johnathan Sataloff, MD, offers an overview of many medical conditions that may affect the voice and of their treatments. In a majority of patients, nonsurgical treatment including voice therapy is appropriate before decisions are made regarding the need for laryngeal surgery, and prior to decisions about the venue in which laryngeal surgery should be performed.

Chapters 5, 6, 7, 8, 9, 10, 11, and 12 provide background information (including literature review) needed for various office-based surgical procedures, details of surgical techniques, illustrations, and videos. Chapter 5 discusses basic principles of in-office surgery, patient selection, safety, and patient tolerance. Much of the material in this chapter is new, but portions of the chapter are modified with permission from prior publications by the author (RTS). Chapter 6 on topical anesthesia discusses appropriate anesthetic agents, modes of administration, effects of topical anesthesia on the larynx and pharynx, and potential systemic complications of topical anesthesia. Chapter 7 discusses basics in surgical techniques and operative approaches for office-based laryngeal surgery including transnasal, percutaneous, and transoral approaches. Chapter 8 reviews office-based injection laryngoplasty. This chapter reviews important anatomical and surgical considerations, sites and force of injection, short-term and long-term outcomes of office-based injection laryngoplasty, and potential complications. The chapter includes case and video examples to assist the reader in understanding the principles put forth. Chapter 9 on office-based laryngeal injection of botulinum toxin discusses the various indications and techniques. Videos provide examples of injection through a flexible endoscope, and external injection using laryngeal electromyographic guidance. Chapter 10, "Office-Based Laryngeal Laser Therapy," provides information on various kinds of lasers, lesions appropriate for office-based laser management, techniques, limitations and complications of in-office laser surgery, and clinical case discussion. Chapter 11 reviews office-based injection of steroids and other substances including cidofovir, 5-fluorouracil, saline, growth factors, and other materials. Special considerations and clinical examples are included. Chapter 12, "Office-Based Laryngeal Biopsy, Excision of Masses and Dilation," presents information on biopsy, precise resection of vocal fold masses, the little-known procedure of in-office laryngeal dilation for laryngeal stenosis, and other topics.

As the popularity of office-based laryngeal surgery continues to increase, it is important for laryngologists, otolaryngologists, nurses and medical assistants, physician assistants, nurse practitioners, speech-language pathologists, singing voice specialists, acting voice specialists, and others involved in the care of patients with voice disorders to understand the principles, precautions, and limitations of office-based laryngeal surgery. While office-based surgery seems intrinsically safer than general anesthesia, monitoring and access to emergency care usually is better in an operating room than in an office, especially if that office is not close to a hospital. For some patients, surgery in an operating room is safer. Patients undergoing surgery in the office require medical evaluation and clearance, informed consent, and other procedures similar to those required for patients undergoing surgery in an operating room and under anesthesia, in many cases. A thorough understanding of

the strengths and limitations of office-based laryngeal surgery allows safe and effective application of this in a valuable option for patient care. The authors hope that this book proves helpful to collect interest in understanding and/or mastering the techniques and judgments required for optimal office-based laryngeal surgery.

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(*Updated 4/30/2021*)

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