

AIRWAY RECONSTRUCTION SURGICAL DISSECTION MANUAL

E J Propst, Y Tirado, F I Abdulkader, M Estrada, P Campisi, V Forte

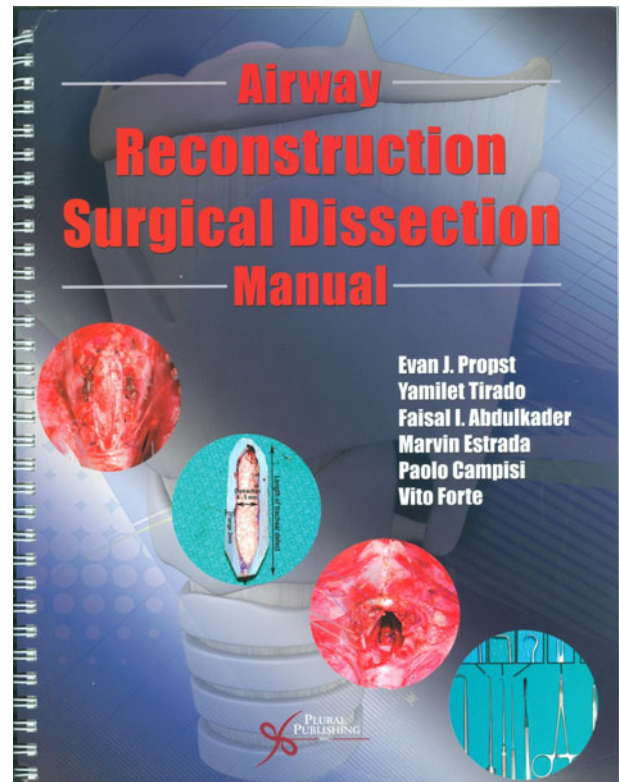
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There is an old London saying (relevant to those of a certain age who are suddenly entitled to a free pass) that you wait hours for a bus and then three come together. Only six months ago I reviewed a laryngeal dissection guide, commenting on its novel idea, and here is a similar offering. Now, instead of cadaver human specimens, the subjects are living (anaesthetised, I hasten to add) piglets, something that may not universally appeal. I defy anyone, seeing the two 'volunteer piglets' gazing out of their cage on page 3, not to cringe.

Doubtless, there is a need for such training. As surgeons, we are generally more comfortable gaining experience on our own species (curiously), possibly because consent is more assured. The preface notes the scarcity of experience in laryngeal reconstructive surgery in humans, with the reduced prevalence of subglottic stenosis. It is also reassuring to note that issues with restricted working hours for trainees are not limited to the UK!

This multi-author work is based on the Toronto training programme. It is a ring-bound manual, printed on tough glossy paper, ideally suited to its likely working environment. There are large and clear colour illustrations throughout, with brief explanatory text. An early chapter takes the novice through an anatomical dissection and cleverly contrasts the porcine anatomy with the human. Fortunately, they do seem well matched. Exercises that follow include cricoid split surgery and laryngotracheoplasty, in all their forms, with guides to harvesting alar and rib cartilage for grafting. Tracheostomy, cricotracheal resection,



tracheoplasty and stenting are particularly suited to what is true surgical practice, after all, rather than a cadaver exercise.

This is a highly specialised field, but the manual would make excellent reading for any laryngologist or paediatric ENT surgeon. The illustrations are of such a high quality, with every step shown, that even a humble otologist felt this looked like easy work. The real message, I am sure, is that this would convince any interested reader to sign up for such a hands-on course.

L M FLOOD
Middlesbrough, UK

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Book Review

E.J. Propst, Y. Tirado, F.I. Abdulkader, M. Estrada, P. Campisi, V. Forte. Airway Reconstruction Surgical Dissection Manual, Plural Publishing, Inc., San Diego (2014), ISBN-13: 978-1-59756-572-1, ISBN-10: 1-59756-572-5

This is an animal-model-based dissection manual that is focused on pediatric airway reconstruction. The authors use this platform (Yorkshire piglets) to describe a series of procedures that have become the mainstay in the management of children with laryngeal and tracheal stenosis. The exposure to these techniques during many otolaryngology residencies or pediatric otolaryngology fellowships is often limited. This educational manual thus has the potential to play an important role by providing a realistic simulation model for acquisition of this skillset. By virtue of the underlying history incorporated in the techniques described, and the practical nature of the animal-model platform, this dissection manual is indeed unique. Novel content aside, the layout and organization maintain the utilitarian structure of many classic dissection manuals. It is spiral bound, has generous margins, additional note sheets, and is largely photo-driven; however, it is not waterproof or splash proof, and is best left on a back bench during dissection.

The manual begins appropriately with an equipment list that is organized into essential, helpful and optional items that may be used in the course of all proposed dissections. It progresses to include a concise discussion pertaining to the procurement, husbandry, and preoperative care of the piglets, as well as operating room setup. A concise but thorough description of surgical preparation and anesthesia induction is outlined in detail, including medication dosing, animal positioning, and the ideal placement of monitoring leads. This allows for a practitioner of limited animal lab experience to successfully perform these tasks in the presence of a veterinarian. The time dedicated to these details, although seemingly mundane in comparison to the remainder of the manual, is an essential component of a well-prepared surgical guide and ensures the humane care of the animals.

The structure of this dissection guide is organized such that a series of procedures may be performed sequentially on the same animal. The manual begins with a description of airway exposure and an explanation of pertinent differences between porcine and human anatomy. It then seamlessly progresses through eleven

procedures that may be performed in the management of children with airway stenosis of varying severity. Each chapter begins with a single page describing disposable items that are necessary for that specific procedure. The Disposable Items list is divided into four sections, including Medications, Sharps, Other, and Optional. Each major step in the procedure is accompanied by a high-quality, color photograph pertaining to the portion of the procedure being described. Photographs are annotated and labeled to enhance the image and a list of "key points" is present in the upper right hand corner of each page in this dissection guide.

Included in the complement of operative techniques are the cricoid split, anterior and anteroposterior laryngotracheoplasty, cricotracheal resection and slide tracheoplasty. Both costal and thyroid cartilage grafting techniques are described. A separate chapter is dedicated to the description of suprastomal stent placement, an essential procedure in the armamentarium of any surgeon performing revision laryngotracheal reconstruction.

This dissection manual is clearly the combined product of education bestowed upon the authors by some of the most innovative airway surgeons of our time. Nevertheless, and as mentioned in the preface, multiple variations to each of the described techniques exist, and these are not covered in this dissection guide. The apt student is obligated to appreciate the limitations of any simulation model; to understand where the techniques described in this surgical manual apply to their patients, and where they do not. When applied appropriately, this surgical guide will be a powerful tool.

Douglas R. Sidell

Stanford University, Department of Otolaryngology-Head and Neck Surgery, Division of Pediatric Otolaryngology, Stanford, CA, United States

E-mail address: dsidell@ohns.stanford.edu (D.R. Sidell).

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