

# Preface

A surgical mentor of mine used to advise his medical students “Don’t act like tourists!” He wanted them to get deeply immersed in their surgical clerkship, to view themselves as vital members of the surgical team, rather than be passive observers who simply watched surgeons work. Of course, this is easier said than done. The tempo of a surgical service is fast and the rotation is already over by the time you figure out how everything runs.

The operating room—the heart of a medical student’s surgical experience—is perhaps the most inscrutable and intimidating aspect of the entire rotation. You will be assigned to cases and will be expected to “read-up” on the operation before scrubbing in. Although this sounds like a simple instruction, in my experience, most students do not really understand how to prepare for a case. Often a student will arrive to my OR having read the latest phase III clinical trial on the disease, but with little knowledge about the patient or understanding of the operation at hand. Participating in an operation has the potential to be one of the most profound learning experiences in all of medical school, but often seems to pass by in a blur.

So, how can you get the most out of your time in the OR? What does it mean to “read-up” on a case? It means that you should know the patient’s story, be prepared to discuss the pathophysiology of the disease, understand why this procedure is being performed, be familiar with the main steps of the case, recognize the key anatomy, and be aware of the most common complications of the operation. This task requires you to pull together information from several different

sources: texts on anatomy and pathology, surgical atlases, and clinical guidebooks. But even this type of diligent preparation does not take into account last-minute changes in the OR schedule. Surgery is a fast-paced field and it is not unusual to be suddenly reassigned to a new operation or to have an emergency case arise.

The concept of this book was to bring together those various pieces of information that a medical student needs to critically understand an operation, and present it in a unified, concise, efficient, and portable format. Throughout the book, the emphasis is on the use of keywords, diagrams, and illustrations in order to enhance your ability to quickly absorb and retain the relevant information. Each chapter consists of several sections, including:

*Introduction:* Just-enough information is presented on each of the common indications for an operation and the relevant pathophysiology. The emphasis is on clinical knowledge over basic science facts, and the aspects that are important to surgical decision-making are stressed. Keywords are placed in bold throughout the text, allowing you to quickly find the information you need.

*Surgical Technique:* Most surgical manuals target the surgical resident, providing technical information that is far too detailed for the needs of a medical student. Nevertheless, some knowledge of the steps of an operation is important for a student to understand the progression of a procedure. In this work, the main steps of each operation are listed, allowing you to follow the case, and interact with your surgical team.

*Complications:* Perhaps the most important aspect of an operation is what might happen after the skin has been closed. What are the most common complications and how do they present? Despite its significance, this information is rarely covered in medical school texts.

*Classic Case:* Each chapter ends with a classic case, since a patient story often sticks in the memory longer than does didactic text. These scenarios describe how a patient's

symptoms presented, how the disease was diagnosed, and whether complications occurred after surgery.

*OR Questions:* “Pimping” the student during a case is one of the traditions of surgery. Each chapter in this book ends with several questions that draw your attention to key concepts or often-asked questions.

*Anatomy:* In traditional anatomy atlases, every anatomical structure in a region is exhaustively listed, whereas only a few of these vessels or nerves may be relevant to a particular operation. In this manual, a color illustration of the operative field accompanies each chapter, and only the structures germane to the operation are identified and labeled. These diagrams have been drawn from the vantage point of the surgeon, rather than an anatomist. In other words, the gallbladder and its blood supply are depicted the way they appear during laparoscopic cholecystectomy, rather than during a cadaveric dissection. This orientation will allow you to recognize the structures that you have learned and follow the course of the operation.

*Radiologic Correlation:* The ability to read cross-sectional imaging such as CT scans is often not formally taught in the preclinical years, but is an integral part of a surgical rotation. Each chapter in this book provides a typical image of the disease process, allowing you to recognize similarities to your own patient’s imaging.

*Summary:* Finally, each chapter ends with a brief bulleted list that provides a visual, concise summary of the information described in the text. Also included is a list of what perioperative orders are appropriate for the type of surgery. These lists serve as a useful review of the concepts described in the text, and also allow quick access to the vital information if you only have a short time to prepare before your case.

A caveat—this book is certainly not sufficient to carry you through your rotation unsupplemented. It is not intended to be the definitive source for your surgical fund of knowledge; in many cases factual detail has been intentionally sacrificed in order to allow for easier comprehension. The purpose of

this work is to bring together the information necessary for you to be an active participant in the operating theater. The better prepared you are for an operation, the more you will get out of the experience.

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