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BOOK REVIEW

Anatomy as a Basis for Clinical Medicine, 3rd edition, *by E.C.B. Hall-Craggs.* 600 pp. Baltimore: Williams and Wilkins, 1995. $36.00.

There has been much discussion about the diminishing amount of time allotted for the study of gross anatomy in medical school curricula. This, along with newer approaches to medical education that emphasize problem based learning and clinical reasoning rather than rote memorization, has provided a challenge to teachers of anatomy. What is the "appropriate" amount of material for a medical student? How can this be learned and used for a lifetime of practice in dealing with common patient problems? A number of texts have appeared which attempt to deal with these challenges, including the one by Dr. Hall-Craggs, now released in a third edition.

The aims of the first edition of this text, as summarized in its preface, included presenting an "appropriate amount of material in a readable and interesting form." In this third edition, the aims remain the same but now material has been added to be used "in support of parallel courses in clinical medicine." The goal here was to include the anatomical basis of "the techniques used in a general physical examination and in a number of investigatory or therapeutic procedures." Many of these laudable goals have been met in this text, but the elusive integration of clinical medicine into the study of anatomy still has not been fully realized here.

The book is organized into nine chapters. A general introduction includes some basic rules of nomenclature and virtually one-page encapsulations of several systems (skin, fascia, bones, joints, neurological, cardiovascular, lymphatics) on a very basic level, which is primarily of use to those students without prior experience in structural biology. The chapter ends with a basic description of various radiologic techniques which might be of more interest to the reader if included in the general text of each section as different ways of clinically evaluating the area under study. Chapters on anatomical areas follow in this order: Back and Spinal Cord, Upper Limb, Thorax, Abdomen, Pelvis, Perineum, Lower Limb, Head and Neck. This general schema of organization works well, allowing the student to "build" the body around a central structure and finish with what many consider to be the more difficult areas of study.

Most sections follow a similar pattern of organization. An overview of the "general arrangement" of each area is followed by bony anatomy, musculature, nerves, vasculature, lymphatics and finally special structures. Topographical anatomy is not emphasized (there are no surface photographs in the entire book) and is presented variably from section to section. Important structures appear in bold face in the text for quick reference, and the style of writing is both enjoyable and "readable," as the author intended. The overall depth of coverage varies somewhat from section to section. The upper extremity, for instance, is described in significantly more detail than are structures in the neck. As a general rule, however, the author's goal of including an "appropriate" amount of material for a more time-constrained course in gross anatomy has been achieved.

Most illustrations used to augment the text are simple line diagrams with limited use of one or two colors. These diagrams are, for the most part, clear and well labeled and used frequently (at least one diagram per page) to convey anatomic relationships. Radiographic studies are also used to enhance the clinical objectives of the text. While some plain films are well annotated, many others would be of much greater use to students if labeling of important structures were added, or if comparisons of normal anatomy and pathologic changes were shown in tandem. This edition also includes a number of CT and MRI scans which are unfortunately of generally poor quality and like many of the plain films often lack appropriate labeling. As a result, the clinical importance and utility of these studies has not been fully exploited and the anatomic relationships that they reveal not fully explained. Additionally, there are many instances where the text refers to an illustration or radiograph that is on the subsequent (overleaf) page. This seems to be more of a problem for this edition of the text, perhaps because of the books' use of more clinical material and more illustrations, both strong points.

The principal change in this third edition of *Anatomy as a Basis for Clinical Medicine* is the inclusion of additional clinical material. In general, these clinical correlations have been added in the form of additional text placed near the end of various subsections of each chapter, rather than incorporated into the description

of the basic anatomy. While this material clearly enhances interest in the anatomy being described, it often lacks the same depth as the rest of the text. Illustrations and diagrams are not used nearly as extensively in these sections as in the "purely anatomic" sections of the book. This tends to diminish the importance of this material, and may leave the student just one link short of solidifying important concepts. Various aspects of the physical exam have been included, for example testing of cranial nerves and evaluation of some pathologic conditions of these nerves. However, in some sections the clinical tests referred to are not described, such as "Trendelenburg's sign," and many relevant maneuvers that would serve to reinforce anatomical points have been left out completely. This is particularly apparent in the upper and lower extremities sections, with very little reference being made here to the musculoskeletal exam. By omitting this kind of "following through," opportunities are lost to focus the student's learning in a clinically directed way. More consistency from section to section combined with the use of actual clinical cases would help to give students more reasons to remember the anatomy. In this way, students can take the enjoyable step of learning to "think like a clinician" early in their careers.

In summary, this text presents an "appropriate" amount of material for first year medical students, and is easy and enjoyable to read. The attempt to include clinical medicine as a part of the learning of anatomical principles improves the third edition. This could be expanded and improved even more by further collaboration with clinicians and teachers of physical diagnosis, which would serve to enhance the number and relevance of the examples chosen.

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