Book reviews

Orthopedic imaging

A. Mark Davies and Holger Pettersson (editors), 385 pages, Springer-Verlag, Berlin Heidelberg 1998
ISBN 3-540-63187-9

Orthopedic surgeons usually look at radiographs themselves and need a radiologist only when they do not understand the picture or when they have something to criticize, except in Scandinavia. In many hospitals there is no full-time skeletal radiologist, who is familiar with orthopedic operative and conservative treatment. Radiologists are not experts in orthopedics and surgeons read diagnostic images with an orthopedic tunnelview. Moreover, they have no training in the technical background of radiodiagnostics. It is in this no man's land between the two professions that this book is a guide.

The target audience may include orthopedic surgeons, interested in skeletal radiology and radiologists, interested in orthopedics.

Orthopedic imaging is a book in the series Medical radiology: Diagnostic imaging and radiation oncology. It has the subtitle "Techniques and applications".

Almost every page has illustrations, which are referred to in the text on the same page. The illustrations have clearly a supporting role and the underlining text is to the point and not overdone.

The book has been divided in two parts: imaging techniques and procedures, and practical clinical problems. It starts with a chapter on radiography, in which a little more attention is paid to digital radiography. It is remarkable that in this MRI era three and a half pages still discuss knee arthrography, while CT arthrography of the shoulder is mentioned only briefly throughout the book, in the paragraphs on arthrography, CT and the shoulder.

The chapter on computed tomography is extensive and very worthwhile reading. It integrates technical aspects smoothly in clinical applications. The same is true of the section on magnetic resonance imaging. A comparison of the commercially available MRI systems with their (dis-) advantages is given and the technical aspects, which are complicated to the ordinary orthopedic surgeon, are explained in an understandable fashion. This chapter concerning a fast developing technique like MR is up-to-date.

Scintigraphy has not been forgotten, although the section on it is short in comparison to ultrasound; its clinical application in shoulder and knee problems receives most attention. The authors of this chapter strongly recommend ultrasonography as a method of soft tissue evaluation and even state "There is no better choice than ultrasound in the imaging of tendons". They make clear that much more can be visualized with ultrasound than is done in many hospitals. We must realize, however, that this imaging modality is highly investigator-dependent and that this section has been written by experts.

Interventional radiological techniques have been described in detail in respect to patient position, choice of needle, aseptic procedures and aftercare. The favorite sites of puncture of the peripheral joints are illustrated. In addition to the choice of contrast medium, there is a small paragraph on the choice of late-acting steroids. Finally, percutaneous removal of small bone lesions is discussed with, for example, CT-guided coagulation of an osteoid osteoma.

Measurements of various angles are very important to the orthopedic surgeon and are discussed in detail. Apart from radiostereometry (RSA), the preoperative assessment of osteotomies and arthroplasty of the knee have been well described.

Since osteoporosis is becoming more of a problem, the different techniques used in bone densitometry are of increased importance. The discussion about the comparison of various techniques, like quantitative CT, dual photon absorptiometry and dual X-ray absorptiometry etcetera, is well-balanced and informative.

The second half of the book, discussing practi-

cal orthopedic problems, is written by radiologists. Starting from a clinical problem, the imaging findings are discussed in a comprehensive style with a lot of clarifying illustrations. The chapters on shoulder, hand and wrist, hip, knee, ankle and foot and spine are of equal quality, but the elbow has been forgotten. The last chapters deal with bone and joint infections, joint prostheses and musculoskeletal tumors.

Orthopedic imaging is a well-illustrated textbook for orthopedic surgeons who have a great interest in skeletal radiology. It will also be a guide for the (skeletal) radiologist who is supposed to end the diagnostic uncertainty in orthopedics.

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Green's operative hand surgery, 4th edition

Eds. David J. Green, Robert Hotchkiss and William C. Pederson, 1,856 pages, Churchill Livingstone 1999

ISBN 0-4430-7955-2

Ever since its first edition in 1982, Green's Operative Hand Surgery has been the "gold standard" for many hand surgeons all over the world. It is the "cookbook" that surgeons go to when embarking on a new type of surgery or brushing up their knowledge to prepare a lecture. One could almost call it the Encyclopedia of Hand Surgery. The editions of this book have come at 5–6-year intervals and the 4th edition is now available. The new edition has been thoroughly revised and there are many new chapters, e.g., on distraction lengthening, pain syndromes and thoracic outlet syndrome. Some topics have been expanded, e.g., arthroscopy and microsurgery and many chapters have been completely rewritten by new authors, e.g., the excellent chapters on congenital deformities, carpal instabilities and nerve entrapments. It is interesting to note that the field of hand surgery now seems to have expanded to the elbow, since there are chapters on elbow arthroscopy, contractures and rheumatoid arthritis.

Some changes in the new edition are difficult to understand, e.g., why divide the chapter on wrist arthroscopy into three different chapters and have two chapters on elbow arthroscopy? The individual order of the chapters seems to me not quite logical, a section on open injuries is followed by rheumatoid arthritis and then by skin grafts. A separate section on thumb reconstruction is inserted between thermal injuries and tumors. There is also some lack of coordination between the chapters, e.g., brachial plexus reconstruction is found in two separate sections, almost 300 pages apart and with much data in common. The typography and layout are not identical in the various chapters, which makes it difficult for the reader to orientate when browsing through the book.

One of the excellent points with this type of textbook is that a large number of key references are given. In most chapters, all references, often several hundred titles, are listed alphabetically at the end. In some chapters, e.g., congenital deformities and nerve entrapments, references are instead divided into subgroups and this system should have been preferred.

Many orthopedic textbooks, e.g., Campbell's, have increased the number of volumes with each edition. Green's Operative Hand Surgery has gone in the other direction and comes in two very thick volumes, with a smaller and more condensed text than previously. The two volumes together weigh over 9 kg. I think this is a drawback, considering that the book is mainly used as a reference, not to be read from first to last page at one time. As a keen reader of Green's book, I already wonder which back will break first, that of the book or my own ...

As a whole, Green's Operative Hand Surgery holds its place as the number one textbook on hand surgery and is warmly recommended.

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Orthopaedic radiology, 2nd edition

Peter Renton, 474 pages, Martin Dunitz Publishers, London 1998
ISBN 1-8537-434-3

This short textbook is based on the recognition of predominant radiological features on plain films. CT, MRI, and scintigraphy are also dealt with in connection with individual cases. Ultrasound, however, is not included, and traumatology and postoperative conditions are not discussed.

The volume is richly illustrated (more than 1,200 illustrations); most figures are plain films but there are also many CT and MR images. The illustrations are of high quality and of good size, and informative figure texts clarify and complement the otherwise short text, but the use of arrows or some other marks would have facilitated identification of pathological changes, especially of the MR images.

Many textbooks dealing with musculoskeletal radiology tend to be very detailed and hard to read. This volume makes a delightful exception; the text is short, straight to the point and easy to read. There are also many informative tables which can be used as lists of differential diagnoses, and an index of the tables makes them easy to find. The general index is also good, which makes the book easy and quick to use.

The chapter bibliographies mainly contain articles from the 1980s and early 1990s, but in the appendix newer textbooks are recommended for further reading.

The book gives a good survey of musculoskeletal radiology for trainees in radiology, orthopedics and rheumatology, for whom it is meant—but it serves well also as a quick handbook in clinical work. For more detailed information, larger volumes must, however, be consulted.

I enjoyed reading the book and recommend it also to radiologists willing to refresh their knowledge in the musculoskeletal field—without getting lost in the brick-a-brack of small details of information.

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