Book reviews

Bone and joint infections

Clayton R Perry (editor), 192 pages, Martin Dunitz Ltd., London 1996
ISBN 1-85317-132-8

The author intends to fill a gap he perceives between the area of the orthopedic surgeon and that of the internist in the field of bone and joint infections. He writes for the orthopedic surgeon, and wishes not to limit himself to a specific kind of infection (such as arthroplastic or posttraumatic infections) or specific techniques.

The book can be divided into three parts. The first contains information on history, bacteria and antibiotics, and the pathophysiology of various bone and joint infections. The second part discusses diagnosis and non-operative treatment. The third part contains three chapters on surgical treatment of osteomyelitis, infected joints and arthroplasties. In a final chapter dealing with case reports, the author tries to outline his approach to specific clinical problems, such as infected fractures, infected non-unions and infected arthroplasties.

The book presents the personal experience of the author, who often writes in the first person, describing his own previous work, such as the implantable antibiotic pump. The chapter with case reports also gives the personal view of the author, describing solutions to several infection problems, and it illustrates the weak structure of the book. Information about, e.g., septic arthritis is found in several chapters: a short description of the pathophysiology is given in chapter 3, treatment is described in chapter 7 on surgical management (but this also includes the repeated aspiration), and in chapter 8. In this chapter with case reports ("specific clinical problems"), short paragraphs discuss acute and chronic arthritis as well. It would have been better to write one chapter for each clinical pathophysiological entity (acute osteomyelitis, chronic osteomyelitis, septic arthritis, etc).

Some techniques are discussed that can be used for reconstruction, such as local muscle transfers and arthrodeses. The choice of surgical techniques is not debated and evidently is solely based on the author's personal experience. The techniques described are, however, not generally accepted as the best choices. Free vascularized latissimus dorsi transfer is not mentioned. Arthrodesis is discussed only in knee and ankle joints and it is suggested that the method of choice is a unilateral external fixator (knee: anterior, ankle: medial), which has been seriously disputed.

The book has many parts that are rather superficial, probably as a result of personal interests and choices of the author. There are some radiographs and figures, but the book is, in general, not very well illustrated. Muscle transfers are illustrated on cadaver specimens, but are not very easily seen. The references are mainly American, Relevant German and French literature, widely available, is hardly cited.

The book may be of value to those who are not yet informed about treatment modalities in bone and joint infections. It is, however, too much the personal view of the author, and does not review pathophysiologic or therapeutic aspects sufficiently.

About 10 symposium-related books concerning bone and joint infections, and another 8 textbooks on orthopedic infections have been published in the last 10 years. These books discuss almost all aspects of orthopedic infections more thoroughly and I read them all with more pleasure. For the next few years, there seems to be no need for another textbook about orthopedic infections, or else it should be devoted to specific surgical techniques to be used in infections. For those who are interested in bone and joint infections, here are my preferences in alphabetical order:

D'Ambrosia R D, Marier R L. Orthopaedic infections. Slack Inc., New Jersey, 1989, 543 pages, ISBN 0-943432-95-2.

Gillespie W J, Nade S. Musculoskeletal infections. Blackwell Scientific Publications, London, 1987, 398 pages, ISBN 0-867-93192-2.

Norden C, Gillespie W J, Nade S. Infections in bones and joints. Blackwell Scientific Publications, Boston, 1994, 438 pages, ISBN 0-86542-273-7.

Schlossberg D. Orthopedic Infection. Springer Verlag, New York, 1988, 182 pages, ISBN 0-387-96719-2.

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Atlas of human cross-sectional anatomy with CT and MR images

Donald R Cahill, Matthew J Orland and Gary M Miller (editors), third edition, 312 pages, Wiley-Liss, New York, 1995
ISBN 0-471-59165-3

According to the authors, this book is "intended for use in the study of human cross-sectional anatomy and as a reference for the interpretion of CT and MR images in clinical medicine and is to be used by radiologists, internists and surgeons" (among others). The contents are more extensive than the title indicates: the book includes sagittal and/or coronal sections of the knee, shoulder, head and spine.

The MR images of the head and neck anatomy have been updated from the second edition with high-resolution MR images, and the MR images of the new chapters on knee and shoulder are also of good quality.

It begins with drawings of anatomic sections on the upper halves and on the left page a corresponding CT image at the bottom and a corresponding MR or cadaveric section image on the right page. In the chapters on head, neck, thorax and abdomen, the CT image drawing on the left side is presented according to Swedish (and probably Scandinavian) praxis, with perspectives from below and the right part of the body to the left on the page. The drawing and MR/cadaveric section image of the adjacent section on the right page are presented in the opposite way—e.g., with the perspective from above. When working on a case and trying to find a section to compare with, it is extremely difficult to change from right to left and vice versa, especially as earlier atlases have not taught us to work in this way.

The table of contents and the index are adequate. It is easy to find the different anatomical sections when opening the book with the help of small additional drawings of the examined part of the body, with the section lines marked on the drawing.

The anatomic drawings are of very good quality and describe small anatomic structures that are not so easily depicted on an MR image. But, unfortunately, the authors have not included such drawings in the new chapters on the cervical, thoracic and lumbar spine. It would have been preferable to have MR images of the thorax and abdomen instead of the cadaveric sections, especially as these parts are developing fields of MR imaging. There seem to be relatively few coronal and sagittal MR anatomy descriptions of these two fields in the available literature and this atlas does not fill that gap.

The chapters on the head and neck are of a high quality, and the anatomic sections of the "neck" (for otorhinolaryngologists) have probably never been presented in a better way.

In this new edition, additional chapters are included with anatomic drawings and MR images of the spine, shoulder and knee, but without comparing CT images, which thus do not fulfill the above-quoted intentions. As the use of CT images in limb examinations is declining towards zero when MRI examinations are available, this is not a major drawback of the atlas. But *The MRI atlas of the musculoskeletal system* by T.B. Möller and E. Reif gives more details regarding the limbs with more numerous sections and has, for that reason, been preferred in practical work at our department. The *Pocket atlas of cross-sectional anatomy, CT and MRI*, also by Möller and Reif, in two paper-back volumes is a cheaper alternative, but with coarser drawings and the MR images are of much worse quality.

If a radiological department intends to buy only one atlas, this book may be a good choice, but for orthopedic surgeons it might be better to buy the atlas written by Möller and Reif, if required, completed with an atlas on the spine.

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Operative arthroscopy

John McGinty (editor), 1235 pages, Lippincott-Raven 1996
ISBN 0-7817-0294-1

Arthroscopy and arthroscopic surgery are among the most rapidly growing techniques in the twentieth century, as said by John McGinty in the preface of the first edition of *Operative arthroscopy*. He was certainly right in that statement and today every orthopedic resident has to have skills in the techniques of operative arthroscopy, especially knee arthroscopy but also shoulder and maybe ankle arthroscopy. The development in this field has indeed been very rapid and John McGinty and his section editors Richard Caspari, Robert Jackson and Gary Poeling have now updated the book into a second edition.

The purpose of the book is to cover the entire field of arthroscopy, and to provide a background from the cell level, including gross anatomy and biomechanics as well as diagnosis and treatments. Therefore the book has become large, over 1200 pages, and to buy it is a considerable investment. However, it may be able to replace some books that specialize on arthroscopy of a single joint.

The first part (200 pages) concerns basic principles, arthroscopic techniques, anesthesia, equipment and also a very nicely written chapter on basic science of diarthrodial joints. There is an important chapter about complications, but it lacks some modern references. A separate chapter describes problems regarding arthroscopy in children, which contains much of value. The review on imaging of the knee was greatly appreciated. It states that there are still shortcomings in the imaging techniques, but the possibilities of the imaging of joints may be limitless. Some chapters in this first section are too long and some are not quite up-to-date.

The specialist section starts with 400 pages about the knee. There is also a chapter concerning basic science of the knee, well written and illustrated. However, much was already said in the chapter on diarthrodial joints and this situation recurs throughout the book. Material is repeated, unfortunately sometimes with different recommendations to the reader. This is a defect in many multi-authored books.

Much valuable material can be found in the knee section and many good points are made by the pioneers in the area of knee arthroscopy. The pages concerning allografts are less interesting for people outside North America. Ken DeHaven still prefers the open technique for meniscal repair, if possible (otherwise he will do it arthroscopically), which is surprising, but a useful reminder that there are sometimes other ways than the arthroscopic. In the chapter on chondral injuries and the arthroscopic treatment of degenerative changes some methods are discussed, that may be widely used, but lack solid scientific support.

About 100 pages concern the cruciate ligaments, indicating that this has become an important area of operative arthroscopy. Again this part starts with a good chapter on basic science of the cruciates and the effects of a cruciate deficiency, covering anatomy, biomechanics, sensory function, gait analysis and regulation and remodeling during the healing process. There is a short section regarding rehabilitation after cruciate reconstruction, which seems to recommend accelerated postoperative rehabilitation. However, it is stated that further research in the field of rehabilitation is necessary. The operative techniques are well described and the reasons why some usual complications eventually occur and how to prevent them are discussed.

The shoulder section has very good chapters on anatomy and clinical examination, while the short chapter on biomechanics might indicate that this is a field where much research remains to be done. An interesting chapter on labral lesions lays emphasis on so-called SLAP lesions, which means injury to the superior labrum from anterior to posterior. The chapters on instability well describe the pathophysiology but, regarding treatment, it is difficult to accept that arthroscopic reconstruction is better than open repair. The chapters on rotator cuff tears and acromioplasties are on a high level.

The elbow is covered in a very pedagogical way, but here, as in other parts of the book, we find slight disagreements between the authors of the different chapters—for example, on techniques and standard portals.

The wrist and hand occupy about 170 pages and this is certainly an area where arthroscopy will be widely used in the near future.

Ankle arthroscopy is now a common procedure, and it is also thoroughly covered.

Although the hip is not a joint on which many operative procedures can or have been performed percutaneously, and still only a minority of orthopedic surgeons are familiar with the technique, it is shown that the hip can be very well visualized with an arthroscope. Hip arthroscopy is an important diagnostic tool and more and more procedures will be done with closed technique in the near future.

Some information about the new field of endoscop-

ic spine procedures is given—of course, providing the reader with very preliminary results of the success rate, but the technique seems promising and exciting. Procedures through a posterolateral approach are mainly discussed, but nothing is said about anterior transabdominal procedures.

Some might say that the title of the book, *Operative arthroscopy,* is not quite adequate. We are not performing arthroscopies only because we use arthroscopic instruments. Obvious such examples are acromioplasties and carpal tunnel releases where the surgeon treats conditions outside joints.

In summary, besides the disadvantage of repetitive information and some chapters that could have been deleted, this is a splendid book with very fine illustrations. It will be useful to many orthopedic surgeons dealing with arthroscopic surgery, but one may consider the advantages of some smaller books, that could be changed selectively as developments in the field of operative arthroscopy rush ahead.

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Arthroscopic surgery. The foot and ankle

Richard D Ferkel (editor), 335 pages. Lippincott-Raven Publishers, New York, 1996
ISBN 0-397-51093-4

This textbook is one volume of a series on arthroscopic surgery edited by Terry Whipple. The volume on foot and ankle arthroscopy provides a complete survey of techniques in diagnostic arthroscopy and arthroscopic-assisted surgery of the ankle, subtalar joint and the first metatarsophalangeal joint. The panel of writers includes 11 authors, with Richard D. Ferkel as the main contributor.

The book is divided into two major sections. The first section deals with topics such as surgical anatomy, preoperative evaluation and imaging, instrumentation and it ends with a chapter on diagnostic arthroscopic examination. The second section deals with surgical arthroscopy, including chapters on soft tissue lesions, articular surface defects (chondral, osteochondral, loose bodies, osteophytes). Arthroscopic assisted fracture treatment, lateral ankle stabilization and ankle arthrodesis are treated in specific chapters, as also are diagnostic and surgical arthroscopy of the subtalar and the first metatarsophalangeal joint. The last chapter is entitled Future Developments and includes a survey of arthroscopic surgery, using laser energy and arthroscopic-assisted extraarticular treatment modalities, such as retrocalcaneal bursa excision, Achilles tendon decompression and plantar fascia release.

Although the author states in the preface to the book that it was not intended as only a technical manual on arthroscopic procedures in the foot and ankle, it is, in fact, the strongest part of the book. The book is extremely well illustrated and each chapter can be read separately as a guide or as inspiration for that particular procedure. However, the author's prescriptions of routine prophylactic antibiotics in ankle arthroscopy are not documented.

The authors try to put each treatment modality into a perspective by referring to papers on the specific topic. It is not their fault that it is not very successful. The reason is a lack of comparable and controlled studies in diagnostic and surgical arthroscopy of the ankle and foot.

This book may well become a classic in arthroscopic surgery of the foot and ankle. It can be recommended to orthopedic surgeons practising foot and ankle arthroscopy or these who are intending to do so.

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Surgery of disorders of the foot and ankle

B Helal, D I Rowley, A Cracchiolo III and M S Myerson (eds), 894 pages. Martin Dunitz Ltd, London, 1996
ISBN 1 85317 212 X

This book is a revised edition of the classic textbook *The Foot*, edited by Helal and Wilson and published for the first time in 1988. The new edition has 62 contributors, most of them from UK and USA. As compared to the 1988 edition of *The Foot*, some topics have been excluded, and a few new ones are included, such as ankle arthroscopy and vascular assessment of the foot. Some chapters appear unchanged, but most of them have been revised according to new developments in orthopedic practice.

I believe this book covers most of the general topics and many of the special topics in foot and ankle surgery. However, I miss a chapter on heel pain and I found no guidelines for performing standard procedures, such as an open ankle arthrodesis or a subtalar arthrodesis. The chapter on operative technique of the ankle and hindfoot in the 1988 edition of *The Foot* has been excluded in the new edition, without adquate replacement in other sections of the text.

The organization of the book, by dividing it into 11 sections, is an improvement compared to the 1988 edition of *The Foot*. Some topics are covered by more than one author, providing the reader with an impression of lacking editorial control. However, this may have been done to provide the reader with the broadest possible spectrum of aspects of the subject, as stated on the back cover of the textbook. Each chapter is an entity, and most chapters provide the reader with an updated review of the topic concerned.

One possibly minor difference between the 1988 edition of this new edition, is its appearance; but this will be noticed by the readers. *The Foot* was published as 2 volumes with a clear print on mat paper, whereas *Surgery of disorders of the foot and ankle* is a 3.6 kg single volume printed on glossy paper, using a slight font. Because of its weight and size, the book will seem unwieldly to the reader sitting in an armchair. When sitting at the writing table, the direction of the light is critical in order to avoid reflection from the paper.

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Atlas of bone scintigraphy in the pathological paediatric skeleton

I Gordon, S Fischer, K Hahn (editors), 343 pages, Springer Verlag, Heidelberg 1996
ISBN 3-540-60471-5

This is an atlas for those who perform a few or a moderate number of bone scintigraphies in children and adolescents. It contains more than 1000 images which cover most of the abnormalities of the pediatric skeleton that are commonly examined with scintigraphy. In 6 chapters, covering infection, arthritis, tumors, trauma, avascular necroses and miscellaneous lesions, excellent images are presented with a very brief text, usually concluded with a teaching point and frequently with a technical comment added.

Most of the images show ordinary whole-body scintigraphy; blood pool images are frequently included. Plain radiographs are presented, and some of the benign tumors increase one's understanding of the scans. Pin-hole (high resolution) images of the hips and some SPECT images are also included. On the whole, there are many interesting cases of good teaching value.

I missed the mention of some diseases. Chondroblastoma, chondromyxoid fibroma and giant-cell tumors are not covered. Hemophiliac bone lesions are omitted; rickets and syphilis, common in other areas of the world, are not there. I also missed pin-hole images of knees and wrists in non-accidental trauma;. Lesions in these regions are difficult to diagnose owing to the normally high osteoblastic activity in the growing skeleton; images with improved resolution have been recommended as routine in the battered infant.

Techniques, protocols and dosages are only briefly presented.

A good table of contents and a brief index make it easy to find lesions that one would like to compare. However, there are no references or suggested further reading.

As in other diagnostic imaging situations, infants and children are a minority in a nuclear medicine department. It is therefore a valuable service to the chil-

dren and to the medical community that this atlas has been presented. It should be available wherever pediatric bone scintigraphy is carried out.

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Medical statistics. A common sense approach

Michael Campbell and David Machin, 189 pages, John Wiley & Sons, Chichester 1993
ISBN 0-471-93764-9

When I first noticed this book a couple of years ago, I immediately thought it was different from most other books on medical statistics. As a senior lecturer in the subject, I had seen several. Many of these had, however, a very operational viewpoint; they seemed to be written primarily for statistics students and were really not very suitable for medical students. Some even appeared to be replicas of standard textbooks on statistics, the only difference being examples from clinical medicine. I was looking for something else to use in my lectures: an introduction to medical statistics with its focus on understanding of concepts, not on general statistical theory and not with detailed instructions on calculations.

This book addresses several important issues in medical statistics: Why should statistics be used in medical research, which design to use in different projects, the number of patients needed to be studied, the characteristics of randomized clinical trials and of observational studies, how materials and results should be presented, confidence intervals vs. p-values, one-sided vs. two-sided test, etc. An important chapter is about common pitfalls in medical statistics. Many contributors to medical journals should regret not having read this. One appendix contains brief descriptions of commonly used statistical techniques with notes on calculations and examples. A second appendix contains a series of multiple choice questions for readers who wish to be sure that they understand. Almost every chapter in the book also has a section on useful points when reading the literature. For instance: "Are the results clinically significant as well as statistically significant? Is equivalence between groups claimed? If the result is statistically significant, what is the size of the effect? Is there a confidence interval?"

There is, of course, a drawback with a common sense approach. The book will not offer very much to readers who look for mathematical digression. Those who want a complete cookbook on the calculation of p-values or a dictionary covering all statistical terms are also likely to be disappointed. In my experience, however, few medical students, nurses, and practising physicians have such interests; and statistics is a matter of common sense.

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