

## Book reviews

### *Disorders of bone and mineral metabolism*

Fredric L. Coe & Murray J. Favus (Eds.), 1118 pages, Raven Press Ltd, New York, 1992  
ISBN 0-88167-749-3

The increasing knowledge of bone and mineral metabolism during the last decades has led to the release of this book full of new data and expert analysis. In the preface of the book a tribute is paid to Metabolic Ward 4 of the Massachusetts General Hospital where Fuller Albright and Edward C. Reifstein worked and presented "the parathyroid glands and metabolic bone disease" in 1948.

The book is a large review of all major advances in science—mainly basic science. 71 authors have contributed, 6 from outside the US. The book covers normal mineral metabolism, bone structure and biology, mineral metabolism during the human life cycle, introduction to clinical mineral disorders, disorders of serum mineral levels, disorders of bone formation and disorders of bone.

One of the more interesting chapters concerns bone structure and biology which covers both functions of bone—calcium storage and structural support. It explains the concepts, such as intramembranous and endochondral ossification as well as the difference between growth, modelling and remodelling of the skeleton. Remodelling events—resorption of old bone and formation of new on the microscopic level—starts in the skeleton in less than 10-second-intervals. If remodelling ceases to function, mechanical failure will occur within 2 years (Frost). This chapter also covers the rapidly increasing knowledge of the macromolecular biology of bone.

In another chapter, methods are presented, diagnostic roentgen, radionuclide scintimetry and the variety of bone mineral measurement techniques; single photon absorptiometry, dual photon absorptiometry and quantitative computer tomography. The clinical use of bone biopsy is also discussed in an easily understandable way.

The 257-page chapter *Disorders of Bone* is an update on primary osteoporosis by Robert Lindsay and Felicia Cosman which covers the literature on primary osteoporosis—an easily readable presentation with several tables. The chapter also covers various secondary forms of osteoporosis as well as heredity, metabolic and neoplastic skeletal disorders. The chapter on primary, cystic and neoplastic disorders of bone is short and comprehensive and offers information on most bone tumors. However, I miss chapters on fracture healing and bone induction.

Most chapters, but not all, have a summary and tables for easy understanding. Who needs such an extensive book on bone and mineral metabolism? Parts could be included in instructional courses for orthopedic surgeons. The book could serve as a reference or encyclopedia in larger departments. The reference list is extensive and up-to-date.

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### *Imaging of orthopedic trauma*

Thomas H Berquist (editor), 928 pages, Raven Press Ltd, New York, 1991  
ISBN 0-88167-805-8

Radiology is essential to the orthopedic surgeon for the diagnosis and treatment of trauma, and it is the duty of the radiologist to provide adequate films. It is also as important for the radiologist to be familiar with orthopedic problems, as it is for the orthopedic surgeon to

know about the possibilities and limitations of different radiological methods.

This product of the Mayo Clinic is a valuable contribution with correlated information on clinical and radiological findings in adult orthopedic trauma and

with the editor as co-author of all chapters. The text is organ-orientated, each chapter containing a description of the normal anatomy, including soft tissues, nerves and vascular structures, as well as the function and mechanics of anatomic areas or joints.

Different projections for plain film radiography are described, as well as the technique and value of arthrography, CT, MRI and sonography. Most fractures and dislocations are well presented together with the problems that the orthopedic surgeon encounters in reduction and fixation. Information is also given on different methods of fixation and the complications of any specific treatment. Fracture healing is described in great detail, and there are separate chapters on soft tissue trauma, stress fractures and post-traumatic infections. Each chapter is followed by extensive and up-to-date references.

The editor has produced an extremely valuable text both for the radiologist who needs more information on clinical details, and for the orthopedic surgeon who gains a lot of information which will improve his ability to interpret radiographs.

The standard of the illustrations is generally very

high but in some instances arrows or numbers on the pictures are hard to see because they are black on a dark background. A few illustrations of the cervical spine demonstrate a clinical problem; the lower cervical vertebral bodies and discs are cut off and any possible pathology is not seen on the film. Furthermore, fractures of the cervical spine are not systematically described and it is hard to follow the account of the mechanisms of cervical trauma. Pros and cons of different fixation devices are given, but the Ilizarov apparatus, nowadays often used for treatment of pseudarthroses or malaligned fractures, is not mentioned at all.

The book is filled with classifications and gradings of fractures and dislocations that are only seldom used in Scandinavia, and very few Scandinavian articles are quoted. Still, this is an excellent book on trauma for both radiologists and orthopedic surgeons and it is highly recommended.

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## **Articular cartilage and osteoarthritis**

Klaus E Kuettner, Rudolf Schleyerbach, Jacques G Peyron and Vincent C Hascall (editors), 800 pages, Raven Press, New York, 1992

ISBN 0-88167-862-7

This book is based on material presented at an international workshop on articular cartilage and arthrosis held in Wiesbaden in 1991, co-sponsored by WHO. Besides 47 chapters grouped in 13 parts there is a final general discussion as well as 31 abstracts. All parts start with a brief summary, followed by several chapters written by well known investigators giving short reviews combined with results from their own research. 8 out of the 219 contributors are Scandinavian.

The references are up-to-date. Every chapter ends with a fruitful discussion. The first 200 pages are devoted to the structure of cartilage and the next 200 pages to metabolism, remodelling and physical properties of cartilage. From basic facts about normal cartilage the subject moves toward abnormal cartilage in the last 400 pages, as it has been studied in animal models of arthrosis. There is also a section on pharmacology and drug evaluation in arthrosis and a most interesting part on clinical aspects and future perspectives, includ-

ing the potential of diagnostic markers of the early stages. Many of the comprehensive discussions following each chapter highlight the problems and give hope for the future regarding both diagnosis and treatment.

In short, this volume covers the latest knowledge of cartilage biochemistry, molecular and cellular biology, physiology, pathophysiology, and biomechanics, giving a solid background to clinical aspects of arthrosis. The language is suited not only for basic scientists but also for any orthopedic surgeon interested in this rapidly growing field of research. Read it to learn more about the role of interleukins, enzymes and growth factors in arthrosis, or to find out whether it is likely that strenuous running can be of importance in the genesis of the condition in the hip and knee.

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