Book reviews

Lumbar disc disease

Russell W Hardy, Jr (editor), 2nd edition, 362 pages, Raven Press Ltd, New York, 1993
ISBN 0-888167-951-8

Although entitled Lumbar Disc Disease, this is basically a book on degenerative lumbar spine disorders, edited by Russel W Hardy Jr at the University Hospital of Cleveland and with contributions from 39 authors. In this edition the chapters on radiology and surgical techniques have been thoroughly revised and expanded, and chapters on spinal manipulation and medico-legal aspects of lumbar spine surgery have also been added.

The initial chapter on historical aspects of sciatica is followed by lumbar spine anatomy, well illustrated by radiographs and schematic drawings. The natural history and clinical diagnosis of disc degeneration and herniation is then followed by an updated chapter on imaging techniques. A number of non-degenerative pathological findings on plain films, such as plasmocytoma, lipoma and diastematomyelia, are also described. The chapter on MRI is up-to date, including a discussion on the problems of interpreting early postoperative MRI.

Non-surgical treatment of lumbar disorders, including manipulation of the spine, is given 10 pages, followed by 190 pages on surgical treatment. In the 3 chapters devoted to surgical treatment of lumbar disc herniation, conventional open disc surgery is thoroughly described and well illustrated with schematic drawings. Descriptions of alternative exposures in lateral herniations, including paraspinal and paralateral approaches, are included, as well as the techniques of microdiscectomy and percutaneous discectomy. The authors report a success rate of 75 percent after automated percutaneous lumbar discectomy (APLD) in carefully selected patient groups. A chapter on repeat procedures for recurrent pain includes descriptions of diagnostic procedures, stressing the advantage of Gd-enhanced MRI in these conditions. The results of surgery reported by the authors are in accordance with others, showing satisfactory results not only in patients having recurrent disc herniation, but also in many patients with bony compression.

Five chapters cover lumbar spine fusion with or without instrumentation. Contradictory opinions are sometimes presented on the indications for fusion in patients with degenerative spondylolisthesis and spinal stenosis. Charles A Fager states on page 120 that "Regardless of the extent of the laminectomy, I have not found it necessary to consider spinal fusion or instrumentation in these patients". On page 183, in a chapter on indications for fusion, it is, however, stated that "We believe that patients with degenerative spondylolisthesis who undergo decompression of neural structures should have fusion at the time of laminectomy"!

Lumbar spine fusion is more commonly performed in the United States than in Europe, and the chapters on fusion procedures are characterized by rather liberal indications for surgery. This phenomenon is well illustrated by one of the case reports in which the results after spine operation, nos. 12, 13 and 14, are described!

In short, this volume covers the surgical treatment of common lumbar spine disorders. It is easy to read and informative, although some repetitions could have been avoided. The book can be recommended to any orthopedic surgeon interested in lumbar spine surgery.

Bo Jönsson
Department of Orthopedics, Lund University Hospital, S-221 85 Lund, Sweden

Diagnosis and management of pathologic fractures

Joseph M Lane and John H Healey (eds), 176 pages, Raven Press, New York, 1993
ISBN 0–7817–0062–0

In the preface the editors state that the aim of the book is to give the reader a welldefined approach to each of the common forms of pathologic fractures, and to rapidly delineate the principles of management. Contributions have been made by 16 authors, from 10 medical centers. The majority, however, represent New York City, notably Cornell University Medical Center.

The subject is treated in a broad sense, the introductory chapter on pathologic fracture repair being followed by chapters on osteoporosis, osteogenesis imperfecta, Paget's disease, metastatic disease, spinal neoplasia, primary malignancy and fractures through benign lesions. Osteoporosis is discussed in 2 chapters, metastatic disease, including spinal lesions, in 3, together making up roughly half of the book.

The introductory chapter gives a brief and adequate review of normal fracture repair, followed by a short discussion on the possibly detrimental influences of metabolic disease, tumors, chemotherapy and radiotherapy.

Chapter 2 provides a review of medical treatment, including hormones, calcium, fluoride, vitamin D and biphosphonates; a treatment protocol, used at the Hospital for Special Surgery, is presented. Most orthopedists will probably find this chapter more useful than the following, in which surgical treatment is presented in 16 pages. The statement on page 40 that "non-ambulatory patients are never treated primarily by hemiarthroplasty, except for a pathologic fracture" seems to reflect a certain confusion concerning the definition of "pathologic" fractures. On the whole, it seems unnecessary to include 16 pages dealing with the enormous subject of osteoporotic fractures in a textbook on pathologic fractures.

A short and well-written article about osteogenesis imperfecta is followed by a rather comprehensive account of Paget's disease, including diagnostic procedures and treatment regimens. This chapter contains more information on the disease than most medical textbooks and is well worth reading.

The rest of the book deals with tumor conditions, starting with appendicular metastases. The first article is a general discussion about mechanisms of metastasis, clinical features, diagnostic approaches and therapeutic principles, which is very informative. However, it seems unnecessary to repeat a full page of this chapter (p 94) in the following chapter (p 99). The uncertainties concerning prophylactic stabilization are emphasized and current guidelines are mentioned. In Chapter 7 some surgical principles in the treatment of pathologic fractures are delineated. The account is rather brief, obviously addressing a reader who is well acquainted with fracture surgery and prosthetic surgery. The use of methyl methacrylate in combination with various fixation devices is described and the reader is advised to stabilize as much of the afflicted bone as possible by using long-stemmed prosthetic components or intramedullary nails, as tumor recurrence may otherwise cause refracture. Since the reader, at this point, is asked to rely on the authors' personal experience, it might be appropriate to add that other authors have had good experience with nail-plate fixation and short-stem prosthetic devices, and that medical reports comparing different fixation devices used for pathologic fractures are scarce.

The final 2 articles describe resectional surgery of malignant lesions and summarize the management of fractures through benign lesions. These subjects are seldom discussed in orthopedic textbooks, and are worthwhile reading for the orthopedist.

This is not a book I would recommend to the orthopedic surgeon in search of a surgical manual on the treatment of pathologic fractures. It does, however, comprehensivly summarize general approaches to pathologic fractures, in a very broad sense, making selected parts of it recommended reading for medical practitioners treating tumor patients.

Johan Nilsson
Department of Orthopedics, Lund University Hospital, S-221 85 Lund, Sweden

Bone histomorphometry. An official publication of the American Society for Bone and Mineral Research

Erik F Eriksen, Douglas W Axelrod, Flemming Melsen, 74 pages, Raven Press, New York, 1994
ISBN 0–7817–0122-8

This book can serve as an introductory manual for those who are new to the field of bone histomorphometry and perhaps to a lesser extent as a reference guide for those already in the field. The authors, two of whom are Danish and one American, are all leading authorities in this field. The book integrates fundamental concepts of the cellular basis of bone remodeling with the methods of histomorphometric analysis and provides a foundation for understanding bone dynamics and improving diagnostic and therapeutic interventions.

Some short introductory notes are given on skeletal growth modeling and remodeling as well as bone macroanatomy. Differences as well as a likeness between cancellous and cortical bone are pointed out. Explanatory illustrations and micrographs are abundant. The color prints are sometimes almost artistic in their beauty.

59 references are provided, 21 of which to the authors' own publications.

There are only a few minor concerns about this book. One is a repeated misprint of μm for mm, especially in the first part of the book. As this book is primarily intended for newcomers to the field, this error is seriously misleading. A short book like this, of course, cannot cover all different aspects of histomorphometric analysis. The question is, however, whether the book is too short and whether a totally inexperienced newcomer can understand all the histomorphometric indices given, without a concomitant personal guidance in front of a microscope. Personally, I would also have liked to have some words about which of these histomorphometric variables are useful for clinical diagnosis in the individual patient and which are more suitable for research purposes in groups of individuals.

Nevertheless, *Bone Histomorphometry* is a book which can be highly recommended to those who want an introduction to this field paralleling practical learning. Although thin, it contains amounts of information and data usually found in books twice or three times as thick.

Karl Obrant
Department of Orthopedics, Malmö General Hospital
S-214 01 Malmö, Sweden