

## Book reviews

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**Bone markers: biochemical and clinical perspectives.** Edited by *Richard Eastell, Matthias Baumann, Nicholas R. Hoyle and Lothar Wiczorek*. Pp 240. London: Martin Dunitz, 2000. ISBN: 1-84184-023-8. £65.00.

Osteoporosis is changing. We now have effective drugs which can reduce the risk of fractures by some 50%. The question is for whom should they be prescribed? Potentially, the primary-care physician can reduce or at least postpone the crushing burden on orthopaedic services of an ageing population with its inexorable rise in the rate of hip and other fractures requiring operations. However, these treatments need to be targeted. For example, bisphosphonates appear to be ineffective in those with normal bone density, besides being expensive. Of the three principal approaches to predicting fractures, measurement of biochemical markers has so far been the least promising. Bone densitometry, principally dual x-ray absorptiometry and the radiological confirmation of a previous fracture, particularly of the spine, have shown much more promise and are widely used, although in the case of vertebral radiology, generally badly. This book asks whether there is now a case for the new generation of biochemical markers.

Generally, this is an amusing book to skim through rather than a useful book for the practising clinician. To paraphrase Rossini's put-down of Richard Wagner "it has lovely moments but awful quarters of an hour". Perhaps there was an element of envy here; Wagner was to discover an apparently inexhaustible and generous line in sponsorship from the mad King Ludwig of Bavaria. Reading this book makes one wonder whether those who finance current attempts to introduce biomarkers into the routine diagnosis of osteoporosis, suffer from a truly Bavarian level of enthusiasm. Perhaps the best approach to this book, unless the reader is active in research, is to enjoy the science and to admire the effrontery of the marketing.

For those without the recent overview by Graham Russell on the 'Regulation of bone metabolism', the book is almost worth its price for his chapter alone. Russell always delights with his clear and lucid exposition of the important elements of the basic science of bone and its relevance to the understanding of how to manage skeletal disease. There follows a series of chapters devoted to the various markers of bone resorption: N-telopeptide cross-links of type-I collagen, C-telopeptides and pyridinium cross-links, and bone sialoprotein. In the case of bone formation, the chapters are on bone-specific alkaline phosphatase (not absolutely specific!), osteocalcin and the various products of collagen synthesis which are discarded during its assembly from procollagen. There follow three chapters on sources of biological variability which explain much about the paradox that these markers are so useful in research and yet have failed to make much real impact on diagnosis.

In the next chapter on the effects of fracture or disease on biochemical markers, Michael Kleerekoper neatly gets to the nub of the problem with his remark that while the markers are important in assessing and managing diseases in which bone turnover is massively or at least greatly disordered such as in

Paget's disease, osteomalacia, and hyperparathyroidism, in osteoporosis the improved sensitivity over the older markers has not been accompanied by a sufficient increase in diagnostic specificity. Another suggested use of these biomarkers is to monitor the response to therapy. If this is read as compliance with therapy, then I would accept that markers are near to proving their place. However, as Aubrey Blumsohn argues, on statistical grounds alone, it is unlikely that these markers will be sufficiently prognostic of clinical success in preventing fractures.

The book concludes with three chapters reporting the results of prospective studies using fractures as the principal endpoint. The essential message here is that two major studies, the OFELY study and the study of osteoporotic fractures, disagreed. The former found that resorption markers predicted hip fractures and the other that they did not. Given constraints on research funding and even allowing for the enthusiasm of sponsors and investors in diagnostics, it still seems doubtful that these questions will be answered definitively within the present decade.

*Jonathan Reeve.*

**Syndromes of the head and neck.** 4th edition. Edited by *Robert J. Gorlin, M. Michael Cohen Jr, and Raoul C. M. Hennekam*. Pp 1283. Oxford, etc: Oxford University Press, 2001. ISBN: 0-19-511861-8. £165.00.

This book represents the definitive work in this field. The senior author, Robert Gorlin, is an acknowledged expert, and his co-authors also have international reputations. Since the publication of the first edition in 1976, the book has continued to expand, and the new fourth edition has reached the majestic size of 1283 pages, covering 1500 syndromes in which the head and neck are involved. The 29 relevant chapters are laid out in logical sequence, with extensive references. The authors have comprehensively achieved their aim of providing up-to-date and accurate information in a lucid manner.

Many of the conditions which are reviewed involve the skeleton and, for this reason, significant portions of the book will be of interest to orthopaedic surgeons. This classical work certainly warrants prominence in every medical library and it would not be out of place in any academic institution devoted to the musculoskeletal system.

*Peter Beighton*

**Masterclasses in spinal surgery.** Edited by *Alexander Vaccaro and Todd J. Albert*. Pp 535. Stuttgart, etc: George Thieme Verlag, 2001. ISBN: 3-13-125991-4. DM 348.00.

This is one of the most comprehensive texts on spinal surgery covering a wide range of spinal conditions without being superficial. It is hard to think of any spinal topic that has not been included in its 535 pages, which are divided into seven sections with contributions from 87 authors, mostly renowned, practising orthopaedic and neurosurgeons from the USA.

The editor's philosophy is that physicians are educated by their patients and in keeping with this assertion, the subject matter is presented in the form of 63 specific case histories, chosen to demonstrate the nuances of clinical presentation and the individual circumstances which determine the choice of treatment.

The reader is stimulated to become actively involved in reaching the diagnosis and in planning each patient's treatment. The headings for each case include: *History and examination; radiological findings; diagnosis; management* (both conservative and operative); and *postoperative management*. The final sections are 'discussion', which addresses the subject as a whole, and 'alternative management' in which other treatment options are discussed with their advantages and disadvantages listed in the form of a table for ready comparison. The recommended reading list at the end of each chapter provides the relevant scientific evidence. 'Pearls and pitfalls' are highlighted in the left margin, with useful tips about diagnosis and treatment and to give warning when extra caution must be exercised to avoid errors or complications. The thorough neurological assessments in syndromes of the cervical spine are particularly instructive with more clinical detail than can be found in monographs on the neck. There is also much more operative detail than might be expected from a work which is not designed to be an operation manual.

By accepting that complications do occur, this book becomes representative of practice in real life, thus providing some very lively chapters on such conditions as iatrogenic instability, pharyngeal damage causing infection after anterior cervical fusion, leakage of CSF, postdiscectomy discitis, destructive osteomyelitis after spinal decompression and postlaminectomy kyphosis. Traumatic conditions include occipitocervical instability because of ligamentous disruption, cervical bifacetal dislocation with damage to the cord, rotatory C1/C2 subluxation, thoracolumbar instability, low lumbar fractures, sacral fractures, and gunshot injury of the spine. The details of management of the spinal cord and vertebral column are comprehensively discussed and in the case of gunshot wounds, there are special considerations for the management of a transdural injury. Cases of tumours include that of a 16-year-old boy with an osteosarcoma of a thoracic vertebra and there is a detailed account about the management, including preoperative selective embolisation, then surgical treatment by *en-bloc* spondylectomy plus reconstruction of the vertebral column. The importance of radical *en-bloc* vertebrectomy in the younger patient with a potentially curable malignancy is contrasted with that of the anterior or posterior palliative procedures.

The management of the spinal conditions is appropriate and sensible in most cases, but there are a few in which the operative treatment seemed to be sportingly aggressive, e.g. anterior transthoracic vertebrectomy with cage fusion and eight-level posterior instrumented fusion for an osteoporotic 'burst fracture' in a 67-year-old patient after a simple fall, and the even more controversial instrumented posterior fusion from T1 to sacrum in the case of a child with osteogenesis imperfecta.

Scoliosis is very well covered, starting with the options for management of congenital scoliosis, through adolescent scoliosis with a variety of options, including posterior and/or anterior instrumentation and fusion, to the management of untreated adult scoliosis. As an example of the helpful detail in this book, it informs us that dural tears with leakage of CSF occur in about 10% of spinal operations, and then provides recommendations for initial repair and ways of dealing with persistent leaks. Direct repair of the dura is compared with the insertion of a drainage catheter and of bed-rest in hospital for four days. The detailed discussion includes the choice of suture material, the use of fibrin glue and tricks which allow repair of the laterally situated tear of the dural sleeve.

This book is interesting enough to be read from cover to cover, but is also a mine of information for reference purposes. Its practical value will make it difficult for the surgeon to decide whether to keep it in the library or in the theatre suite and therefore more than one copy may be required!

Robert Marshall

**A practical guide to sports injuries.** By Malcolm T. F. Read. Pp 321. Oxford, etc. Butterworth-Heinemann, 2000. ISBN: 0-7506-3251-8. £32.50.

This inexpensive book has been written by one of the few full-time sports physicians in the UK. It is a distillation of his experience of the management of soft-tissue and sports injuries over the past 20 years. It is an unusual but interesting book which tries to act as a guide to the less experienced doctor who is working in the field of sports medicine. I attempted to assess its value in aiding clinical diagnosis and although there are a few 'pearls of wisdom' there are also some glaring problems. What is mechanical back pain? There is little guidance for the less experienced doctor although this is a defined entity. In the field of the shoulder, subacromial impingement has become better understood but is barely touched upon and some of the newer clinical tests for the assessment of injuries, particularly of the ankle (injuries to the distal tibiofibular syndesmosis) and the shoulder (instability and tears of the rotator cuff), have been neglected.

There are some valuable chapters in this book which make it worth buying for the doctor who wants help with assessing and managing sports injuries. Among the highlights is Chapter 20 which focuses on 'Rehabilitation and training with an injury' and provides guidance on how to help the injured athlete to rehabilitate. The rehabilitation ladders are valuable and can be adjusted as our understanding of rehabilitation improves. I also found Chapter 22, the 'Glossary', informative. There are very few books in which the eponymous names for diagnoses and clinical tests are so clearly laid out. However, there is scope for improvement even here. Gerdy's tubercle is called Gurney's tubercle and Hughston's jerk test was described as Hughstan. These are minor irritations. What is more concerning is the conservative advice which is offered for a number of injuries such as rupture of quadriceps femoris muscle (now colloquially called the Bill Clinton injury) of which I have personal experience, and rupture of pectoralis major which does justify early repair in certain types of sportsman. It is difficult nowadays for one person to write a guide covering the breadth of sports injuries and this book highlights some of these problems. I would recommend that when the second edition is printed (and I think it should be) then the involvement in its preparation of perhaps an orthopaedic surgeon whose field is the upper and lower limbs would give considerable added value.

Would I recommend this book to a doctor working in the field of sports medicine? Yes, it has some very valuable guides to the management of soft-tissue injuries. Would I recommend it to a surgeon working in the field of sports medicine? No, they would find the gaps in surgical management disappointing and some of the advice given is clearly inappropriate in the 21st century.

W. Angus Wallace.

**A surgeon's guide to writing and publishing.** Edited by M. Schein, J. R. Farndon and A. Fingerhut. Pp 288. Kemberton, Shropshire: TFM Publishing Ltd, 2001. ISBN: 1-903378-01X. £21.50.

The object of writing a paper is to convey information to the reader. Subsidiary reasons may be to advance academic status and to gain professional promotion. None of these aims will be achieved unless the article is concise, coherent, well illustrated and properly referenced. It must, if possible, entertain as well as inform. Although the ability to write well is an uncommon gift, nevertheless the craft of writing can be learned by dedication and practice. It should be within the competence of any surgeon to produce a reasonable article.

This book is a comprehensive account of current views on writing as it should be practised by the surgeon. It contains chapters by many different authors, some with conflicting views, but all expressed succinctly in very readable form. All aspects of medical publishing are covered with an entertaining Epilogue summarising all that has gone before.

The prospective author must undertake a thorough search of the relevant literature before commencing his task. It must include reading this excellent book.

*F. Horan*

**Neck and back pain: the scientific evidence of causes, diagnosis and treatment.** Edited by *Alf L. Nachemson and Egon Jonsson*. Pp 495. Philadelphia, etc: Lippincott Williams & Wilkins, 2000. ISBN: 0-7817-2760-X.

Readers of these pages will observe that acknowledged experts in special fields are usually enlisted to comment upon special subjects. This work, edited by Nachemson and Jonsson, addresses one which presents to every category of surgeon, orthopaedic or otherwise, every rheumatologist and indeed every manner of practising doctor, with the single exception of the spinal surgeon!

As defined, 'back pain' refers to that group of patients from whom cases of demonstrable pathology have been excluded, for example neoplasia, chronic infection, ankylosing spondylitis, etc. In his introduction, Professor Nachemson writes: "By back pain, we mean painful conditions of the neck and lower back...so common that they can be regarded as a natural part of life". It is unlikely that even a reasonable number of causes will emerge. In the meantime, sufferers will not wait patiently for a conclusion from controlled and well followed up trials. Today's medicine cannot be based on tomorrow's evidence. The mediaeval attribution to 'evil spirits' differs little from 'rheumatism' or 'fibrositis' of the 1930s. Treatments, of which 53 are listed on page 2 and subsequently addressed in the second half of the book, include several which are probably harmful, given by therapists, including surgeons, who promise to correct what they presume to be amiss.

The editors have compiled the definitive treatise on this subject, presenting and assessing the core material from a thousand authorities. It is a classic of clear, logical, constructive medical writing, and a model of clinical research.

Books by many authors are often criticised for repetition, overlapping and irregularities of style, but not this one. It has the uniform consistency of a monograph, perhaps a duograph because, of the 21 chapters, nine have Alf Nachemson as co-author and seven have Gordon Waddell. The seamless succession from chapter to chapter suggests scrupulous subediting, but also that the team of 17 was chosen for their likeness of mind. In the search for evidence, the strictest criteria of randomly controlled trials are hardly possible. The authors have therefore analysed and evaluated the relative strength of a thousand published studies, varying from strong evidence (controlled trials) to hardly any (anecdotal reports). This is not, however, an impersonal deduction from meta-analysis but rather a careful extraction of anything of value from each contribution.

There are pages of succinct summaries of published work in the form of tables with conclusions from each. Quoted references are

not simply listed but filtered for facts; there are 13 pages of them after the chapter on 'Assessment' alone. The outcome is certainly critical but not destructive, sceptical without being nihilistic, so that the reader, and I fancy I am typical, was fascinated, absorbed, even excited by the scrupulous, logical process of analysis. It is a book easy to read, stylish and unambiguous, transparently geared to every reader, irrespective of whether he or she knows much or even anything about the subject. More than any other serious book, I found it very hard to put down and have even begun to read it again. Whatever personal interest of the reader within the breadth of medicine, this book is important as a model of how to think and how to write about practical medicine on a subject still full of conundrums. The book has a very great deal of information to convey but, most importantly, it will undoubtedly inspire future investigators.

The aspects examined range from epidemiology to biomechanics, neurophysiology, psychology, social stresses and economics. The second half records the outcomes of various forms of treatment, both conservative and surgical, for acute and chronic conditions. This is not a list from which the biased reader is invited to choose. It must all be read, and the reader of each chapter may well be surprised. In Chapter 10 (p. 237), Nachemson himself introduces the section on treatment with a short discussion on the natural tendency for regression towards the mean and the placebo effect. To the scientist, this is the false effect to be subtracted from results in order to reveal the facts. But it is much more than a fake tablet pretending to be treatment: it includes a whole ambience of consultation and therapy, the doctor's attention, his sympathy and empathy, the style of décor of the office and the doctor, and perhaps most of all his reputation from his peers and his patients. All add up to the inspiration of confidence. How easily can all these be employed by the charlatan and yet, in many cases, they constitute a powerful therapeutic force – a weapon would be the wrong word – which must be scrupulously used in order to avoid abuse.

In recommending this book, I have tried my best but failed to abstain from its pithy sound bites, like:

"Traction adds the complications of immobilisation to the deleterious effect of bed rest."

"Most types of specific exercise programs are no more effective than the alternative regimes...including none."

"There is no evidence for the use of corsets or belts...or acupuncture."

"NSAIDs provide temporary relief...no one is proven to be more effective than any other."

"Advice to continue activity gives faster symptomatic recovery and less chronic disability."

The authors' encouragement of ordinary activities include DIY house repairs, gardening, golf, in fact any activity in the course of which your spectacles are likely to fall out of your breast pocket. The depressive effect upon the doctor who listens to the history of chronic and recurrent back pain, stems from a fear of impotence once the standard investigations are proved negative. Having read this book, the reader will be empowered or at least assured, not so much that his impotence is well founded, but that he will not have missed a therapeutic essential in his supportive and encouraging management of the patient. I cannot recommend this book too highly for every doctor's personal bookshelf and, indeed, bedside table.

*Michael Laurence.*