Central nerve plexus injury

Edited by T. Carlstedt

Pp. 190. London: Imperial College Press, 2007.

ISBN: 978-1-86094-573-1. \$98.

Injuries to the intraspinal plexus, most commonly the brachial plexus, have posed a considerable problem in management, and indeed have, in the past, been thought to be impossible to treat with any hope of reasonable success. In recent years considerable advances have been made and now, for the majority of such lesions, a decision has to be made not as to what can be done but what should be done. This is certainly true for lesions which lie in the more peripheral part of the plexus and do not involve avulsion of the nerve root from the spinal cord. It has been considered impossible to succeed in implanting an avulsed nerve root into the substance of the cord since this is part of the central, as opposed to the peripheral, nervous system. However, following extensive laboratory work, much of which has been undertaken by the author of this book, it has been shown that reimplantation can be achieved, producing, when successful, relief of pain and variable return of function. The procedure has been undertaken clinically in a few centres with promising results. Following an introductory chapter, Professor Carlstedt gives a lucid account of the natural history of intraspinal plexus injury with examples from clinical practice. This is followed by an account of the surgical and neuro-anatomy of the brachial plexus and a detailed review of the clinical assessment of injuries to both the brachial and lumbar plexus with the associated neurophysiological and radiological investigations.

The possibilities for nerve transfer for injuries to both the brachial and lumbar plexus are discussed, and their place in management defined.

The lifetime of experience of the author is then crystallised in a section devoted to the basic science of experimental root injuries. An understanding of this detailed account is necessary in order to appreciate the problems encountered in attempting to reimplant nerve roots into the cord. The surgical approaches and techniques of reimplantation are then discussed. It is clear that these operations are not to be undertaken by the inexperienced or the faint hearted. Considerable technical expertise is required, but the chapters dealing with the outcomes and conclusions show the promise that these procedures may have for those with an otherwise hopeless prognosis.

Although such injuries are, fortunately, not common, they will be encountered on occasion by all orthopaedic surgeons. The lesson to be learned is that injuries to the cervical or lumbar plexus should be referred as a matter of urgency to a suitable expert. Early operation will lessen the possibility of the disabling pain which has been such a troublesome problem and will enhance the likelihood of functional recovery.

F. Horan

Atlas of orthopedic pathology

Edited by L. E. Wold, K. K. Unni, F. H. Sim, M. Sundaram

Pp. 547. Philadelphia: Saunders Elsevier, 2008. £143.00

ISBN: 978-1-4160-5328-6.

The difference between health and disease is pathology; upon it all treatment depends. So it is sad and strange that this subject is often relegated to the tutorial sessions in preparation for exit examinations in Orthopaedics. Within the field of bone pathology, this book provides the clearest images of those diseases which present to the pathology laboratory.

To turn the pages of this largely pictorial tome, is to wonder at the brilliance of the photomicrographic reproduction (many reminiscent of the designs on William Morris wallpaper), the clarity of the radiographs and the breadth of permutations of tumour-like disease. It is clear that the work comes from a Centre of Excellence with the support of a first class imaging department. But the clinician in the clinic might be left floundering in the (largely) unknown. He will find no pathology of broken bones, nothing of the delays or failures of bony union, only a couple of pictures of tuberculosis, a few of the spine in general, of metastatic carcinoma, and of degenerative joint disease (most of which are of bizarre manifestations of it). The coincidence of fracture and neoplasia which confuses so much skeletal disease, is not addressed as a separate subject. It is referred to obliquely rather than histologically. One suspects that the rich archive and museum specimens from the Mayo Clinic have been reproduced and then categorised for admiration, rather than the subject categorically taught. A good example is the very first, opening chapter, entitled Hyperparathyroidism. Pictures of great beauty and bright colour depict a massive but unusual 'brown tumour', the adenoma of the parathyroid gland, the skull in osteodystrophy and the affection of the kidney in the disease.

To whom is this new and artistically beautiful book directed? The preface addresses those in training in the specialties of Bone Pathology, Orthopaedic Surgery and Radiology. We note however that of the five Editors, three are Pathologists and one a Radiologist. But in taking a view for this particular Journal, I must assess its value to our readership. Perhaps the title is deceptive? One might be led to expect a comprehensive view of the problems which confront the clinician, the causation of which he desperately needs to know. But at the start of the Preface, the subject is described more accurately as "Tumours and Tumour-like Conditions". How else could one explain the total absence of all the common conditions lining up in the outpatient clinic?

In regard to its content it cannot be faulted, except in regard to these fundamentals. For the trainee in orthopaedic surgery, there is a great need to understand the disease with which the patient presents. This book proves the reputation of the editors but does not help towards the difficult diagnosis. Histopathology is never as straightforward as the images here suggest, although the brief text frequently points out that variations from these classic examples are virtually universal. This is an invaluable book, to be held in the histopathology laboratory, but the learning clinician needs it only as he approaches the exit examination.

M. Laurence

Hip resurfacing: principles, indications, techniques and results

Edited by H. C. Amstutz

Pp. 258. Philadelphia: Saunders, Elsevier, 2008.

ISBN: 978-1-4160-4724-7. £149.00

Orthopaedic surgeons started to resurface the hip in the 1930s, but it is only within the last decade that hip resurfacing has become widely accepted within the hip arthroplasty community. Figures from the United Kingdom National Joint Register show that over the last five years, the concept has been employed in a little over 10% of hip arthroplasties in the United Kingdom. The author has probably been involved in the evolution of hip resurfacing for longer than any surgeon still in practice, having started with his THARIES metal-on-polyethylene resurfacing system in 1975. He turned to metal-on-metal bearings in the late 1980s, and this led to the introduction of the Conserve Plus system in 1996. It is therefore fitting that he should now produce a textbook on the subject.

The book starts with a fascinating introduction into the history and evolution of hip resurfacing, though it is surprising that Philip Wiles' hip, implanted from 1936 in London, has not been included. The basic science is well covered, with chapters on femoral head blood supply, mechanics, tribology and imaging. A particularly important chapter on outcome studies follows; the UCLA hip scoring system is described in detail, as is the SF-12, and the authors' own surgery form. Gruen's radiographic follow-up form is also presented. Other scoring systems which are widely used, such as the Harris and the Oxford, are not mentioned. The chapter on surgical technique is very specifically Amstutz's own philosophy, describing his posterior approach and the Conserve instrumentation. There is no mention of the rationale behind other approaches, such as the Hardinge or Ganz techniques which may be less dangerous to the blood supply of the femoral head. These should at least be mentioned, even if not covered in detail.

The chapter on surgical technique is followed by chapters on indications, results of the Conserve Plus, modes of failure, and reaction to wear products. This last chapter does mention the literature on hypersensitivity reactions, but does not discuss the more recent reports of pseudotumours. Finally, there are several chapters on the various aetiologies of hip disease in the young and the role of resurfacing in these conditions. It is often suggested that inflammatory arthritis is a contraindication to resurfacing, but this has not been my own experience and I was pleased to see that Amstutz supports resurfacing in this group. The last few chapters address assessment and management of the 'failed resurfacing'. Groin pain has been described in some patients, but this is not mentioned here. The penultimate chapter is entitled 'Rehabilitation and Activity'. This is not a guide to therapists, but a brief report of the activity levels enjoyed by some patients after hip resurfacing, and could have been included in the outcomes chapter. The last chapter consists of the authors own views of the future.

The production standard of the book is high, with many illustrations. A CD ROM is included which contains a video of the surgical technique, the Wright Medical operative technique video for the Conserve instrumentation, and five patients demonstrating how successful the results can be. Overall this is a useful book, although it is a rather personal account of the experience of a single group under the leadership of the author. I am still awaiting the definitive book on resurfacing which will cover all the designs and philosophies from the various groups involved around the world, and some attempt at a dispassionate, long-term comprehensive review.

C. Krikler

Skeletal trauma Volumes I and II fourth ed.

Edited by Browner, Jupiter, Levine, Trafton & Krettek

Pp. 3456. Philadelphia: Saunders, Elsevier, 2009.

ISBN: 978-1-4160-2220-6. \$679

It was with pleasurable anticipation that I was asked to review the fourth Edition of Skeletal Trauma, Volumes I & II by Browner, Jupiter, Levine, Trafton and Krettek. I bought the first Edition shortly after its publication in 1992 and was impressed and inspired by its sensible, comprehensive and up-to-date advice on all aspects of fracture management. I used it both in my practice and for teaching. The four principle editors have used the knowledge and experience of a multitude of experts in specialist fields of skeletal trauma to provide authoritative opinion on both the common and unusual clinical situations faced by workers in the trauma field. The editors have produced a consistency of style which make the text readable and the illustrations and tables particularly memorable.

The fourth edition contains further innovations. The sub-title of the two volume edition is "Basic Science, Management and Reconstruction". The main editors remain and are joined by Krettek from Hanover, who has produced two DVDs of clinical management of a selection of trauma and reconstructive cases in the lower limb, including for example, femoroacetabular impingement and reconstruction of a complex tibial plateau malunion. The DVDs include mini lectures, animations and operative videos from his Hanover courses, commenting in English in the style of AO course videos.

The publishers have also recognised the potential for early obsolescence of major medical textbooks by including an online version of the complete text, including illustrations and photographs. The content is downloadable for private use, but subject to the usual copyright regulations. In addition there is a facility for regular updates, both of content, images and videos obtainable for an annual fee. This facility is easy to use and allows readers to consult sections of the work without having to carry heavy volumes around with them.

The format of the new edition is generally similar to the previous volumes. The text is slightly smaller, and colour is widely used in figures and tables. The brilliance of colour is supposed to add interest but it is sometimes distracting. Radiographs are usually of high quality but are easier to interpret on the computer screen than in the printed version. This also applies to the clinical photographs.

Skeletal Trauma is undoubtedly a technical masterpiece. It is certainly comprehensive and covers every clinical eventuality likely to be encountered by surgeons and other health professionals in their trauma practice. The exhaustive sections on General Principles in Volume I is particularly useful for orthopaedic trainees from early core surgical training up to and beyond FRCS (Trauma & Orth). The chapters on Management of Specific Fractures are written by experts in the field, who clearly bring their own preferences to bear in treatment. All the alternative techniques are discussed and the bibliography in each case is extensive. Recent technical developments, using angle-stable implants, minimally invasive approaches, low profile plates and current versions of intramedullary nails are discussed throughout, and the cases quoted are fascinating to both the novice and the expert. I am impressed by the emphasis on outcomes and the management of complications, both early and late, which are often not covered in standard texts.

It is difficult to find fault with this edition of Skeletal Trauma. Such a comprehensive resource can sometimes be unwieldy and rather intimidating to its readers, but not in this case. It remains a standard reference which should be part of the armamentarium of every orthopaedic department.

J. S. Albert

The athlete's elbow

Edited by W. N. Levine

Pp. 98. Rosemont: American Academy of Orthopaedic Surgeons, 2008.

ISBN: 978-0-89203-455-0. £51.

This book is a multi-authored monograph. "It is not intended to present the only or necessarily best methods or procedures.... but represents an approach, view, statement.... which may help others." Those others are "orthopaedic surgeons, residents, fellows, sports medicine experts, primary care physicians and allied health professionals." – a broad congregation!

As a sports physician I expected the title "Athlete's Elbow" to include descriptions of sporting techniques that lead to injury, their conservative and surgical management and rehabilitation back to sport and above all, planned avoidance of re-occurrence. The baseball pitcher is discussed in some detail but how the 'hows' and 'whys' of other sports, and indeed conservative management in general, is either non-existent or glossed over with brief references; autologous blood and doppler guided sclerosant injections get no mention. However, the physician will gain much from the clear descriptions of examination techniques that lead to the diagnosis and need for surgery. There is a wise comment of the problems, side effects, and indeed the change of surgical competence required to perform some of the operations. Referral to the best surgeon is important. Rehabilitation is concerned with post-operative management and time-orientated return to sport, rather than details of training to the pitch of perfection.

This is primarily a book for the sports surgeon in its detailed analysis of the varied surgical techniques required for soft tissue, apophyseal and impingement injuries around the elbow. The minutely detailed surgical techniques that comprise most of the book are well illustrated with clear line drawings and intra-operational photographs. Importantly, the differing techniques are evaluated at some length from references sources, and the personal comments help the reader understand the author's surgical preference.

The title "The Athlete's Elbow" suggests that it is all-encompassing and will be of value to all its above defined audience, but in reality this is a monograph of some elbow injuries sustained in sport, for orthopaedic surgeons by orthopaedic surgeons.

M. Read

recovery". It becomes apparent early on that the initial mad rush into minimally invasive surgery of the hip has been tempered by experience. The chapter by Ali and Pagano on the two-incision approach elegantly relegates the idea that this is a reasonable route by which to approach the hip. In a discreetly understated conclusion they note that there is no scientific evidence to suggest that this approach is better than any of the others, the complication rate is high, the difficulty greater, the resultant muscle damage "measurable", and the functional and cosmetic results no better. All being well, this should dissuade surgeons from adopting this anatomically absurd approach.

Otherwise, throughout the book, the basic principles of approaching the hip for total hip replacement through a short incision, emerges as an attempt to make recovery quicker and more comfortable. The media have seized on the concept leading to a wave of "patient demand". Surgeons have responded by adopting one of several techniques. The learning curve was steep and a number of patients have been injured as a result. One recalls Mallory's justification for climbing Everest; "because it's there".

The best results have probably been achieved by experienced surgeons who have simply reduced the length of their standard incision. While a few may adopt a Smith-Peterson approach, the majority use a limited anterolateral or posterior incision. "Limited incisions" appear to vary in length between 7 cm and 12 cm depending on the dimensions of the patient. Some surgeons were obviously using standard incisions of considerable length. "Minimally invasive" is a term should be dropped on the basis of Mardones' cadaver studies which have shown that the damage to muscle is not as "minimal" as was originally thought. Recovery is probably slightly quicker in the short-term, but no better in the long.

This is a good monograph which should certainly be read by any surgeon using one or other of these techniques. The different approaches are well-contrasted and each chapter addresses the literature as well as the author's individual experience. The references are relevant and extensive. My only slight reservation is with the half-tone illustrations which are rather grainy, a problem that is well-recognised both by editors and publishers. It is particularly apparent in some of the operative photographs which, since they are inevitably of small incisions, are not of the same quality as the text. This, however, should not deter the specialist hip surgeon from adding this volume to his library.

A. Ross

Limited incisions for total hip arthroplasty

Edited by M. I. O'Connor

Pp. 66. Rosemont: American Academy of Orthopaedic Surgeons, 2007.

ISBN: 10: 0-89203-424-6. £34.50

This slim volume is one in a series of monographs produced by the American Academy of Orthopaedic Surgeons. In six chapters it addresses the five principal "limited incision" approaches to the hip joint and the rehabilitative techniques for achieving a "rapid