15–17 Nov European conference on systemic lupus erythematosus, Amsterdam, The Netherlands
Contact: Conference Secretariat, IMEDEx, Bruistensingel 144, PO Box 3283, NL-5203 DG's Hertogenbosch, The Netherlands. Tel 31 73 408 304. Telefax 31 73 408 304

In 1991

12 Apr BSR Spring Meeting, Oxford
Contact: Dr A Mowat, Heberden Roundsman

30 June–6 July XIIth European congress on rheumatology, Budapest, Hungary

18–20 Sept 8th BSR annual general meeting, Imperial College, London

In 1992

13–15 Apr 3rd International conference on systemic lupus erythematosus, Queen Elizabeth 2nd Conference Centre, Westminster, London
Contact: Dr G R V Hughes, Rayne Institute, St Thomas's Hospital, London SE1 7EH. Tel 071 633 9422

Book reviews

Osteoporosis: Prevention, Management, Treatment. H H McIlwain, D F Bruce, J C Silverfield, M C Burnette. (Pp 150; \$9.95.) New York: Wiley, 1988. ISBN 0-471-61688-5.

This is a handbook for patients, actual and potential, and for all lay readers with an interest in osteoporosis. It is written jointly by three American doctors, one a specialist, who share a Florida practice, and by one professional writer. Within its context it provides a comprehensive account of osteoporosis—what it is, how it should be managed, its risk factors, signs and symptoms, and plans for prevention and treatment from childhood to old age. It is profusely but clearly illustrated, readable, and informative.

It might be argued that the benefits of high calcium intake and calcium supplementation are less well proved than the authors uncritically maintain. The minute details given of the calcium content of everything we eat might, therefore, lead to unnecessary obsessions on the patients' part.

Nevertheless, the book is judicious in its recommendations for therapy and treads a fair line between accepted and experimental treatment. Other details include a simple description of quantitative computed tomography and even the exact calcium content of every 'dish' available at McDonalds and Burger King! The flavour is therefore transatlantic, and one disadvantage to British readers is the limitation of all drug names to American proprietary preparations. Despite this, it may be the best paperback handbook on the subject to date and can be recommended to all interested lay readers and other health care groups in nursing, physiotherapy, and dietetics.

Royal National Orthopaedic Hospital,
234 Great Portland Street,
London W1

T C B STAMP

Acupuncture, Trigger Points and Musculoskeletal Pain. P E Baldry. (Pp 308; £27.50.) Edinburgh: Churchill Livingstone, 1988. ISBN 0443-039-917.

Dr Baldry, a consultant physician and past chairman of the British Medical Acupuncture Society, has written an excellent book on this often neglected area.

He gives a clear account of musculoskeletal pain and its relation to trigger points. These points often at a distance from the site of the pain may be treated by the insertion of acupuncture needles. The author's stated aim is to take acupuncture out of the category of alternative medicine, and I believe he has succeeded in writing a book which will be of interest to many.

The book is divided into three parts. The first gives an interesting short account of the development of acupuncture in China and its subsequent use in Europe from the 17th century. The second part discusses the basic principles of trigger point acupuncture. This section also includes a chapter on the

scientific evaluation of acupuncture with a summary of relevant trials and useful chapters on the neurophysiology of pain and the pain suppressing effects of acupuncture. Areas of future research are suggested.

The third section of the book is an extensive practical manual based on the personal experience of the author. This section, as are the others, is clearly written and gives his approval to diagnosis and treatment together with appropriate case histories. Each chapter is well illustrated with clear anatomical drawings and pain referral patterns from trigger points. There is an up to date list of references at the end of every chapter.

Department of Rheumatology,
Addenbrooke's Hospital,
Hills Road,
Cambridge CB2 2QQ

B HAZLEMAN

The Colour Atlas of Bone Disease. Victor Parsons. (Pp 112; £14.95, paperback.) London: Wolfe Medical, 1989. ISBN 0-7234-1602-8.

This is a paperback edition of a volume first published in 1980 and unfortunately not revised. It has some very beautiful illustrations which show (most often) the clinical appearances of the disease backed up by histological examination of the tissues where appropriate. As an atlas it therefore achieves its purpose.

The introduction, quite rightly, mentions the importance of a dietary history and includes tables of foods with high calcium, phosphate, vitamin D, and vitamin C content. The illustrations which accompany these tables are in an appendix at the end of the book which serves no useful purpose. It consists of four pictures of 100 g portions of food items such as bread, sardines, and milk which, even if you did not know what sardines look like, are of such poor quality as to be of no help.

The section on osteoporosis describes use of the Singh index of femoral trabecular patterns for the diagnosis of osteoporosis. Unfortunately, no mention is made of the newer and more reliable techniques for measuring bone density. When vitamin D physiology is discussed the active metabolite of vitamin D, 1,25-dihydroxycholecalciferol, is incorrectly referred to as 1,25 OHCC when it should be 1,25(OH)₂CC, an error which should not be present in a book dealing with bone diseases.

The section on the microscopic structure of bone is beautifully illustrated and describes clearly the events in bone remodelling. There is no mention made, however, of the role of growth factors and cytokines in bone cell physiology. Such an omission clearly indicates the need for a new, revised edition. In the chapter on 'Bone involvement in system disease' conditions such as achondroplasia and osteogenesis imperfecta are illustrated but there are no diagrams for the various mucopolysaccharidoses. A subsection in this chapter deals with bone disease accompanying inflammatory joint disease. There is a brief mention of rheumatoid arthritis with appropriate

illustrations. Psoriatic arthritis gets just a few lines with no illustration of the arthropathy. Juvenile chronic arthritis is inappropriately—at least in a British textbook—referred to as juvenile rheumatoid arthritis. In addition, hypertrophic osteoarthropathy is incorrectly called acute pulmonary osteoarthropathy, even though there are multiple causes for the occurrence of this condition, other than pulmonary tumours.

I enjoyed looking at the illustrations of this book, some of which are of historical interest, as it is unlikely that one is going to see patients with syphilis with destroyed hard palate and nasal septum. A major criticism of this book is that the opportunity for up-dating the text has not been taken with this paperback edition. If the contents were brought up to date then this book would prove valuable to undergraduates, MRCP candidates, and clinicians such as rheumatologists, geriatricians, and orthopaedic surgeons.

Royal National Hospital for
Rheumatic Diseases,
Upper Borough Walls,
Bath BA1 1RL

A K BHALLA

Biomedical Engineering: An International Symposium. Eds Wen-Jei Yang, Chun-Jean Lee. (Pp 360; £42.) Basingstoke, Hants: Hemisphere (Taylor and Francis group), 1989. ISBN 0-89116-827-3.

A collection of the papers presented at the second international symposium on biomedical engineering held in June 1987 in Taiwan, this book is a strange mix of three only loosely linked topics: musculoskeletal mechanics, cardiac mechanics, and bioheat and mass transfer.

The book's opening message is given by Y C Fung who uses pulmonary blood flow to illustrate how mathematical modelling, with appropriate experimental support, may lead to more useful and satisfying explanations of the behaviour of physiological functions. This sets the scene for what is to follow. A trilogy of papers from the Mayo Clinic has been written by Ed Chao with the subjects of muscle forces, modular endoprostheses, and body segment motion. The first and last of these, in particular, are true to the theme of mathematical modelling and all are very well written and illustrated. Readers without a mathematical background may prefer to concentrate on the introduction and conclusions. Another very useful feature of all the papers is the extensive list of references quoted in each area.

The paper on a modular prosthetic system for segmental bone and joint replacement after tumour resection is a clear review of early attempts to replace malignant tissue with artificial components. The Mayo clinic's programme is described with clarity and purpose and is a pleasure to read.

The third of this set of papers looks at body segment motion measurement. Stereometry, goniometry, accelerometry, and magnetic field coupling are all evaluated as techniques. The author resists the temptation to tell us which method he favours, preferring to emphasise the difficulty of kinematic studies and encouraging the reader to analyse the results with care.

The paper on spinal motion by S S Wu did not help me a great deal. The aim was to predict dynamic behaviour of spinal motion segments using mixed finite element models and poroelastic theory. I had difficulty with the author's abbreviated style, however, and the explanations of the mathematics were

not clear to me. In contrast, the biorheology and deformation of spinal cord injury was well described and argued. I have to say that I could not have carried out the experiments described, but the results were interesting and applicable. As with many animal experiments, the link to human subjects is not always totally clear. In cats and rats a clear link between permanent loss of function and severity of cord strain was shown, however. This may be an obvious conclusion, but the authors put quantitative values on the strain levels which cause damage. A very well presented paper on the biomechanics of traumatic subdural haematoma completed this section. Monkeys were subjected to neck injuries and these were modelled using finite element analysis of stress levels in the parasagittal bridging veins of the brain. The importance of the direction of impact in an accident was emphasised in the findings.

The mid-section of the book consists of 11 papers on various aspects of blood flow. These range from studies using one-plane cineangiocardiology, through a new method of analysing myocardial function using wall stress-areal strain relation—that is, a method of defining regional work, to ultrasonic Doppler echocardiography. This work is interestingly written and covers a broad spread of research in the blood flow field. The approach using fibre optic methods to transmit laser light to the coronary arteries and veins and then to measure blood velocity using laser Doppler shift was described. This is already finding considerable use while being developed further. A long review of cardiovascular responses to reduce gravity relates very obviously to manned space flights but has interesting lessons for the fundamental mechanics involved as well as the factors which develop tolerance to it. Following clinical cases of changes in blood rheology, in which viscosity, red cell rigidity, platelet aggregation, and plasma protein concentrations were all investigated in patients with total artificial hearts, the conclusions reached were tentatively that changes in microcirculation might be due to rheological changes induced by the total artificial heart itself.

I was fascinated to read about 'pulse feeling' in Chinese medicine where the clinician originally felt at least nine areas of the body (three at the head, three at the hand, and three at the foot). In modern times this tends to be more restricted in its application, though essentially it relates to the pressure pulses passing through blood vessels owing to inertia, compliance, and resistance. There is a delightful scattering of Chinese symbols throughout the paper and essentially the pressure waves are felt by the clinician using his fingers as transducers to help in diagnosis.

In the final section dialysis, filtration, and absorption properties of blood are considered together with hyperthermia as a treatment for tumours. The whole of the book is true to its title—*Biomedical Engineering*, but does not really have a consistent theme. This is emphasised even more by the camera ready production, which means that each paper is typed in a different font. The binding is superb, however, and almost everyone who has passed my desk during the past few weeks has commented on how good the book looks. Undoubtedly it is a library volume as the book is essentially a reference work. I imagine not too many clinicians will buy it, but I hope that at least those interested in orthopaedics or blood flow will take it from the shelf from time to time.

School of Engineering and Applied Science,
University of Durham,
South Road,
Science Laboratories,
Durham DH1 3LE

A UNSWORTH