Book reviews

Normal and Osteoarthrotic Articular Cartilage.

Institute of Orthopaedics Symposium, November 1973. Edited by S. Y. Ali, M. W. Elves, and D. H. Leaback. 1974. Pp. xiv + 317, figs. + tables. Institute of Orthopaedics (University of London), London (£5.25)

The book records the proceedings of a 3-day symposium on normal and degenerate cartilage held in London in November 1973. The meeting was organized by the Institute of Orthopaedics of the University of London. The list of participants, a third of whom were members of the Institute, includes several well known investigators, mainly from the U.K. and U.S.A. The formal contributions are mainly summaries of published work. Most are illustrated, accompanied by a useful list of references, and followed by a carefully edited discussion which adds interest and insight to the text.

Considerable emphasis was placed on the biochemistry and metabolism of noncollagen components. At the structural level, a major topic was the recently discovered role of hyaluronic acid and other less well-defined 'link' factors in the aggregation and stabilization of proteoglycans. As in other workshops on cartilage, less attention was given to the question of the interaction between proteoglycan and collagen, which seems to be as obscure as ever. Progress in the characterization of enzymes involved in the breakdown of cartilage is described, and we are given a glimpse of the potentially important area of enzyme-inhibitor research. There is a masterly paper on solute transport in articular cartilage and its significance for metabolic studies. Some difference of opinion is expressed about proteoglycan turnover rates, one estimate of which indicates that the mean half-life of sulphated proteoglycans may, in fact, be much longer than has been thought to be the case. In osteoarthrotic cartilage, evidence is presented favouring enhanced metabolic activity associated with raised levels of degradative enzymes. Problems arising from site variations within a joint, to say nothing of the variously diseased tissues in arthrotic joints, are emphasized by several participants and will continue to complicate work in this field.

Other sections include papers on the morphology of cartilage, the morbid anatomy of osteoarthritis, the immunology of cartilage transplants, and the early changes in certain types of experimental osteoarthritis.

The symposium ends with an open discussion of the pathogenesis of osteoarthritis. Various models are paraded, and, happily, the discussants contrive to side-

step the semantic bog of ageing and provide a stimulating and instructive discourse.

In spite of its (unavoidably) limited content and rather late appearance, this paperback remains a useful document for those engaged in studies of cartilage or joint disease.

J. BALL

Low Back and Neck Pain. Causes and Conservative Treatment. By Paul C. Williams. 1974. Pp. ix + 78, figs. Thomas, Springfield, Illinois (U.S. \$5.95)

'In order to get a rudimentary understanding of the close structure of the spine', writes the author in his opening chapter, 'it might be helpful to picture a tall stack made up of alternating hockey pucks and jelly donuts.'

Those readers who get past the opening sentence will find that the rest of the wording is in English English—clear, readable, explicit, not too patronizing for lay readers. The author's message is also clear and his explanations highly systematized. His premise is that the human spine is really meant to be straight or, better still, in a somewhat fetal position, and has never really adapted to the plantigrade stance. His 'first commandment' for low back and leg pain sufferers, *always sit, stand, walk, and lie in a way that reduces the hollow in the low back to a minimum*. It is also his second and third commandment, since he repeats it on several occasions for further emphasis, and each time in italics. What most doctors would regard as a normal extension or lordosis in the lumbar spine he feels is a fault to be corrected as far as possible. So it follows, or rather he affirms that it follows, that conventional spinal extension exercises are bad and perpetuate back pain instead of relieving it. He feels that the extensor muscles are already overdeveloped in back pain sufferers and what they need is a flexed attitude of the lumbar spine and cervical spine. The later chapters on neck pain repeat this message and a whole series of admonitions and clearly described exercises, based on flexing the neck and lumbar spine, are set out. He gives enough detail for the patient who has an actual acute prolapsed intervertebral disc in the neck or lumbar spine to desist from these exercises. But for him most back pain arises primarily from disc degenerative changes causing narrowing of the neural foramina and it is this narrowing which is best corrected by exercises which flex the spine whether standing, sitting, or lying. For those who accept this explanation of back and neck pain this would be a useful book to recommend to patients. And for those who are sceptical (and that includes the reviewer) it remains an interesting idea.

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