

may have developed their stress fractures more from repetitive over-use than rapid explosive muscle action on bone. This over-use would have its effect via longitudinal stresses on the bone and studies on such stresses in the normal femur (Koch, 1917) have indicated that maximal tensile stresses occur on the medial side of the upper mid-shaft of the femur and in the femoral neck.

The authors thus postulate that an interplay of forces exists between muscular action at their insertions and the longitudinal impact forces through bone both serving to fatigue and fracture the medial femur mid-shaft. The different types of activity highlighted by the different athletes illustrate the ends of the spectrum of biomechanical stress.

CONCLUSIONS

Stress fractures of the medial femoral mid-shaft are being diagnosed in athletes.

The authors have noted a feature of the presentation of this condition which has been described for the first time as the "hanging leg" sign.

Consideration of the biomechanical factors at play amongst the athletes studies has led to the consideration of muscular forces and longitudinal stress through bone. We believe that it is a combination of these that contributes to the development specifically of medial mid-shaft stress fractures in the femur of the athlete at risk.

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BOOK REVIEW

Title: REHABILITATION OF THE INJURED KNEE
Editors: Letha Hunter and F. James Funk, Jnr.
Publishers: Mosby. UK: Blackwell, Oxford
Price: £52.50 440 pages Figs. Tables

This is a four hundred and forty page book with multiple authorship by distinguished international experts in their fields. The initial chapters on anatomy, biomechanics and surgical reconstruction are excellent reviews with thoughtful considerations for future developments. To an Orthopaedic Surgeon they cover familiar ground to anyone who has wandered and groped through the clinical maze through the last five years.

The chapter on chemical basis of tissue repair is one hundred and sixteen pages in length and divided into sections on the biology of ligaments; and the biology of cartilage. This is unfamiliar territory for an Orthopaedic Surgeon, for example "These hydroxylysine-derived cross-links have resonating forms, with the initial imminium forming an enamine, which can tautomerize to the more stable ketoimmine"!

However, there is much that seems to ring true in a clinical context and the relevant historical view for "English speaking" publications appears to be very sound, informative and interesting. There is, for example, an excellent section on the regeneration and repair of menisci which has enjoyed a recent interest.

The Neuromuscular basis of rehabilitation includes a useful account of the technique of muscle biopsy and the clinical relevance of classification of muscle type.

There is a fascinating chapter on protective motion and dynamic splinting; and most instructive accounts of physical therapy which includes conditioning; exercise therapy programmes and special chapters on women's and children's rehabilitation.

Overall this is a very good book and a worthwhile addition to a departmental library.

M. L. Harding