Anatomical location of athletic injuries during training: a prospective two year study in 2701 athletes

In a review of risk factors for lower extremity injury, it was said that alignment of the hip, knee, and ankle has received substantial interest as a potential risk factor. We aimed to quantify the anatomical location of athletic injuries produced during training in order to confirm whether lower extremity injuries are the most common. A second aim was to detect if the knee was the most commonly injured anatomical site in the lower extremity.

We recorded the anatomical location of the training injuries of 2701 athletes in a prospective study (from January 2003 to January 2005). Written informed consent was obtained from the subjects. We studied athletes who trained a minimum of 10 hours a week. The mean (SD) age of the subjects was 39.62 (12.98) years (range 14–63).

We recorded the anatomical location of the injuries suffered exclusively while training; these numbered 781. The injuries were most often found in the lower extremities (n = 660; 84.5%), followed by the vertebral column (n = 58; 7.4%), the upper extremities (n = 44; 5.6%), the trunk (n = 14; 1.8%), and the head (n = 5; 0.6%).

In the lower extremities, the injuries were most often found in the knee (n = 234; 35.4%), followed by the ankle (n = 169; 25.6%), the foot (n = 124; 18.8%), the thigh (n = 70; 10.6%), the iliac region (n = 40; 6.1%), and the leg (n = 23; 3.5%).

The injuries in the vertebral column were most often found in the lumbar region (n = 30; 51.7%), followed by the thoracic (n = 17; 29.3%) and cervical (n = 11; 19.0%) regions.

In the upper extremities, the injuries were most often found in the shoulder (n = 19; 43.2%), followed by the forearm (n = 17; 38.6%), the arm (n = 13; 29.5%), and the hand (n = 4; 9.1%).

Therefore this study confirms that the knee is the most commonly injured anatomical site during athletic training.

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Reference

no mention of associated seronegative arthropathy in cases of bilateral plantar fasciitis.

The final section of the book includes about 10 clinical algorithms for evaluation of musculoskeletal problems, based on different body parts. These are then subdivided into acute and chronic. There are accompanying clinical photographs and in some cases radiographs with line diagrams to help the inexperienced user to the underlying bony anatomy. The algorithms are generally well done, but the clinical photographs would be easier to correlate with pathology if they had arrows to specific painful body sites with common diagnostic entities, rather than the coding that is used.

The principal strength of this book is its consistent format, with subdivisions that make for easy searching of critical information. The two pages per topic are easy to photocopy as patient information sheets. Its shortcomings relate to its heavy North American bias (but then this is its principal market), and the absence of some important clinical entities—for example, I could not find any reference to triangular fibrocartilage tears of the wrist. Also, the list of differential diagnoses is often quite long, without any further indication as to their importance. In this respect, the tables in Brukner and Kahn’s textbook indicating “common”, “less common”, and “not to be missed” pathologies are very helpful. READ codes would be worth adding to the ICD codes.

Who could benefit from reading it? Doctors sitting diploma or fellowship exams will find some value in not missing the key basic points on various clinical entities. However, they will need to look further for a full perspective on various problems. The material is useful as patient handouts, and is a good alternative to their trawling the internet. Senior clinicians wanting a snappy update on a problem they may not have seen recently may also find it of benefit.

Overall, this is an excellent idea that has been competently brought to print. Future editions have the task of providing a more comprehensive world view, plus updating entries based on the continued advances in clinical knowledge.

Rating
- Presentation 17/20
- Comprehensiveness 17/20
- Readability 18/20
- Relevance 18/20
- Evidence basis 17/20
- Total 87/100

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