

## 1. Sports Medicine

### 1 INJURIES AROUND THE KNEE – SYMPOSIUM

Parag Sancheti, Mohammed Razi, E B S Ramanathan, Patrick Yung

10.1136/bjism.2010.078725.1

Knee and shoulder injuries commonly occur in sports. Knee injury accounts for 41% of all sports injuries. One fifth of them involve the anterior cruciate ligament (ACL). Other injuries include meniscus tears, posterior cruciate ligament tears, articular cartilage damages and avulsion of ligaments and tendons.

Treatment of knee injuries has to be based on severity of signs and symptoms and exact pathology. Even though the endeavour of all coaches and trainers is to get the sportsmen back into action as soon as possible, it is the responsibility of the team physician or sports medicine doctor to take appropriate decision regarding their fitness and return to sports.

Prevention of knee injuries is important and can be done by control of intrinsic and extrinsic factors. In addition, proper sports specific conditioning, warm-up, appropriate sports gear, proper cool down and recovery after the event is vital. Maintenance of proper nutrition and hydration and state of mind is important.

The internal risk factors are gender, player's age, joint instability, lack of muscle strength, foot alignment, foot control and body coordination, level of fitness, fatigue, lack of recovery, previous injuries, postinjury rehabilitation and stress. The external risk factors are intensity of training, playing surface condition, position played, exercise load, quality of equipment, type of sports (contact/non-contact, high/low velocity), exposure time and level of competition.<sup>1,2</sup>

Psychological factors are also increasingly being recognised as significant factors in sports performance, injury prevention and rehabilitation. It is necessary to study these factors.<sup>3</sup>

For accurate diagnosis of knee injury history, clinical assessment and proper investigations are essential. Clinical assessment is of paramount importance. Common symptoms of knee injury are pain, swelling, difficulty in walking and giving away sensation. Special tests like Lachman's test, Pivot shift test and joint line tenderness are important.

Management of knee injuries includes conservative and surgical line of treatment. Conservative treatment includes RICE (rest, immobilisation, compression bandage and elevation) and pain-killers. Physiotherapy in the form of exercises, electrotherapy modalities, knee braces and sports taping can also aid in recovery.<sup>4</sup> Operative management includes arthroscopic evaluation and specific treatment of individual pathology.

Meniscus injuries can result in excruciating pains and locking of the joint. Clinical test can lead to provisional diagnosis of the meniscal injuries. MRI will confirm the diagnosis. Whenever possible, that is, if the tear is in the red zone, meniscal repair should be attempted.

It has been proved beyond doubt that resection of meniscus leads to arthritis in the long term.

Partial ACL tears can be treated conservatively. However, if the patient has symptoms of ACL deficiency then ACL reconstruction surgery should be offered. This surgery is now a reliable procedure and gives predictable results. Postoperative physiotherapy is important.

In conclusion, knee injuries can be prevented. However, if they occur, early diagnosis and appropriate treatment along with an

accelerated rehabilitation programme is important for return to sport.

### References

1. **Renstrom P**, Ljungqvist A, Arendt E, *et al*. Non-contact ACL injuries in female athletes: an International Olympic Committee current concepts statement. *Br J Sports Med* 2008;**42**:394–412.
2. **Alentorn-Geli E**, Myer GD, Silvers HJ, *et al*. Prevention of non-contact anterior cruciate ligament injuries in soccer players. Part 1: Mechanisms of injury and underlying risk factors. *Knee Surg Sports Traumatol Arthrosc* 2009;**17**:705–29.
3. Ahern DK, Lohr BA. Psychosocial factors in sports injury rehabilitation. *Clin Sports Med* 1997;**16**:755–68.
4. **De Carlo M**, Armstrong B. Rehabilitation of the knee following sports injury. *Clin Sports Med* 2010;**29**:81–106, table of contents.