INJURIES IN PROFESSIONAL FOOTBALLERS

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ABSTRACT

The incidence of injuries in footballers is described. Nearly half of footballer's injuries involve the knee, with vertical tearing of the meniscus being common; surgical intervention may be required. Approximately one third of injuries involve the ankle, and will often require immobilisation. Other injuries include muscle damage, spondylosis of L4 or L5, concussion, and dislocations. The importance of prompt and correct treatment of injuries is emphasised.

Injuries in professional soccer players are relatively rare and occur in three to four players for every hundred hours of soccer played. Luckily, serious injuries happen infrequently in most major clubs, and there are usually no more than one fracture, two meniscal injuries, and two knee or ankle ligamentous injuries of major importance per season. However, serious injuries should always be excluded by diligent examination, and treatment should be immediate. Since the soft tissues are commonly affected, the immediate treatment is prevention of the complications of swelling and later fibrosis. The immediate treatment consists of the ICE rule (ice, compression, elevation) with anti-inflammatory agents. Certain acute injuries (such as tenosynovitis on the anterior aspect of the ankle) can be treated by local long-acting steroids such as "Depomedrone" (methylprednisolone acetate).

Almost one half of all soccer injuries involve the knee. Sprains affect the collateral ligaments, chiefly the medial, and are often due to a misdirected tackle against the inner aspect of the leg. Sprains of the medial compartment are a much more severe injury and are often associated with meniscal injuries. To test for lateral or medial instability the knee should be subjected to adduction or abduction forces and flexed to 30 degrees to relax the cruciate ligaments. Complete tears require surgical repair. Isolated tears of the anterior cruciate ligament are not common and often associated with damage to the collateral and posterior cruciate ligaments. Good quadriceps tone can in some measure compensate for anterior cruciate weakness, but in the presence of marked laxity surgery may have to be carried out. If

the posterior cruciate remains intact in the presence of other ligamentous tears then the tibia will rotate abnormally around the structure, and rotatory instability results. This type of soccer injury is very disabling and the players have to give up the game.

Vertical tearing of the meniscus is common in soccer players. It is produced characteristically when weight is taken on the semi-flexed knee and there is a superimposed twisting. In the earlier stages, a torn meniscus will produce little symptomatology apart from an occasional dull ache and perhaps a few degrees of restricted movements. However when a large tear develops the torn piece may become displaced medially and cause locking. Clinical diagnosis is unreliable, but an arthrogram will demonstrate approximately 90% of tears, and arthroscopy is the most useful test because it confirms the diagnosis directly. Bucket-handle tears are treated by partial meniscectomy, the torn part is removed, and an investigation by the author over ten years has shown that partial meniscectomy gives much better long-term results than complete meniscectomy does. However, badly torn menisci require complete excision.

Approximately one third of soccer injuries occur around the ankle. Capsular strains of the ankle are common and often lead to numerous osteophytes ("footballer's ankle"). A classical injury is inversion and internal rotation, which results in a sprain of the lateral ligament. This is particularly common during a sliding tackle or a clash of feet. There is local pain and swelling of the lateral aspect, and severe bruising may be

seen extending to the Achilles region and onto the dorsum of the foot. Instability may be shown by stress films or an arthrogram. Plaster of Paris immobilisation is used for five to twenty-one days depending upon the severity of the injury. In the case of chronic recurrent instability, surgical repair may be required. In players who have repeated ankle and Achilles tendon problems, it is worth drawing their attention to the quality of the football boots and pitch. Spikes or studs that give excessive grip predispose to ankle problems.

Muscle injuries are caused usually by direct blows to the thigh, or by pulls, tears or strains such as the chronic groin strain or hamstring injury. Damage may occur within the muscle so that the blood cannot escape (intramuscular), or the tear may extend to the periphery (intermuscular). Intramuscular injuries may take two or three times as long to resolve as intermuscular injuries do. After two days of rest and anti-inflammatory tablets physiotherapy is commenced, heat, massage, and ultrasound. Recovery from a muscle injury has not taken place in a soccer player until there is full power, full extensibility, and a full range of joint movements and skill pattern. Tears of the musculotendinous or musculoperiosteal junction result in pulled or strained muscles, and loss of function is out of all proportion to the clinical signs. Treatment of such pulled muscles relies on rest, anti-inflammatory tablets, and local short-wave diathermy. Mobilisation exercise should be gradual and

incorporate a flexibility programme, which may take three to six weeks. When there is abdominal or upper thigh discomfort associated with groin strain, an X-ray of the pelvis may show osteitis pubis. Luckily this is a self limiting condition but does require rest and physiotherapy for two to four months.

Other conditions commonly found in footballers include spondylosis of L4 or L5. This stress fracture may be asymptomatic, but often the soccer player has lower abdominal discomfort and upper posterior thigh pain. When symptoms are disabling or a slipping of the vertebral body is occurring, a fusion operation may have to be carried out. As with all stress fractures, a bone scan may be helpful in diagnosing the early lesion.

Concussion is not infrequent during a match, and as a general rule the player should abandon the game and not train for five days. As in the case of all head and facial injuries, care must be taken to exclude damage to the brain, cervical spine, and eye.

Dislocations of the acromioclavicular joint, shoulder, and fingers require X-ray before reduction to ensure that there is not an associated intra-articular fracture.

As a general rule, minor soccer injuries must not be taken lightly or dismissed, or they can become the precursor of chronic problems, which often defy complete solution.

DISCUSSION

Mr. Grayson: Mr. Muckle, do you feel it would be a help to the medical profession in the prevention of sports injuries, if they knew, and passed on to the offender, the knowledge that such activity is a breach of the laws of the game and leaves the offender open to criminal prosecution?

Mr. Muckle: There have been no claims by professional soccer players, but there have been three damage claims in amateur soccer. We do stress to referees how important their position is in the prevention of injuries, and we do talk to players, stressing the importance of their approach. I don't think a professional player, in the few seconds during which these incidents occur, will remember anything he has been told in the dressing-room.

Mr. Damoush: Mr. Muckle, in your experience is partial meniscectomy better than total meniscectomy? I believe that when the meniscus regenerates, the remnant of meniscus not removed is fibrous and weak, and I have seen cases of torn meniscus again after the first partial meniscectomy.

Mr. Muckle: I've had no re-tears in the 21 partial meniscectomies I've followed for 10 years. It's difficult to imagine how you could get a tear in the body of this substance. When my diagnosis has been correct, and the meniscus has been peripherally attached, I've just removed the bucket-handle, and had no trouble at all. I'm interested that you have.

Mr. Damoush: How long does it take to perform a partial meniscectomy through the arthroscope? It is done these days, but I have no experience of it.

Mr. Muckle: I've not done it this way either. However, I'd just like to say that partial meniscectomy is only applicable for a basket-handle tear, which has a good prognosis in terms of osteoarthritis; peripheral detachment has a bad prognosis.