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Letter to the Editor

AUDIT OF INJURIES IN A PREMIERSHIP FOOTBALL SQUAD OVER A FIVE-YEAR PERIOD

Dear Editor-in-Chief

Football is currently the most popular sport in the world. The competitive nature of the sport makes it prone to injuries with the estimated frequency being 10 to 35 per 1000 playing hours (Dvorak and Junge, 2000). The aim of this study was to identify the injury patterns and rehabilitation periods with specific injuries in a premiership football club.

Player injuries were retrospectively analysed from a local database (Microsoft Access 2000) at the Blackburn Rovers Football Club, UK from December 1998 to March 2004. The club physiotherapist and physician recorded details of all injuries sustained during both training and matches during that period. Clear distinctions were made between acute and overuse injuries and rehabilitation times for each injury were noted (Arnason et al., 2004). Data was analysed using SPSS (Chicago, Illinois, USA). Differences between the groups were assessed using the independent samples t-test. P values of < 0.05 were considered statistically significant.

There were 483 injuries in 91 players. Of these 133 injuries occurred as a result of overuse and 350 as a result of direct trauma. 440 injuries were treated conservatively while 43 were treated operatively. Table 1 shows the range and number of injuries, which occurred during this period along with the average rehabilitation time for each injury. Injuries grouped as "Other" in table 1 accounted for less than 1% of all injuries and could not always be directly attributed to football even though this appeared to be the precipitating factor in all cases.

There was no statistical difference between rehabilitation times for acute injuries (18 days, standard deviation 30) as compared to overuse injuries (20 days, standard deviation 39) ($p = 0.640$). The mean rehabilitation time however for injuries treated conservatively (15 days , standard deviation 24) as compared to injuries treated surgically (61 days, standard deviation 67) was found to be statistically significant ($p = 0.0001$)

The definition of football injuries still remains controversial (Inklaar, 1994). The traditional criteria of absence from training or games followed by the need for medical treatment leads to an underestimation of the incidence of less severe and overuse injuries(Dvorak and Junge, 2000).. In this study a specific attempt was made to include all injuries including minor and overuse injuries. This closely resembles the Council of Europe definition of a football injury (Dvorak and Junge, 2000). The knee and ankle joints along with the thigh and calf muscles were the commonest location of injuries in this group of players. This pattern has already been documented in professional football players (Dvorak and Junge, 2000; Woods et al., 2002). Four specific injury types were identified as most frequent: hamstring strains, adductor or groin strains, knee sprains and ankle sprains. This pattern however does differ from previous studies in that the incidence of hamstring strains is higher than reported in previous studies (Nielsen and Yde, 1989). The disparity between the number of players and injuries in this study confirms the pattern of repeated injuries associated with professional football. This has been well documented and previous injuries have already been identified as one of the major risk factors for reinjuries amongst professional football players (Dvorak et al., 2000; Nielsen and Yde, 1989; Arnason et al., 2004).

In this study 27.5% of all injuries included overuse injuries. These results differ from those of Arnason et al. (1996) who found a much lower percentage (9%) of overuse injuries in their study. The importance these apparently minor injuries should not be underestimated as the rehabilitation time for these injuries was similar to the acute injuries in our study. All injuries treated surgically ie anterior cruciate ligament ruptures, meniscal tears and osteochondral defects of the femoral condyle had lengthy rehabilitation periods as compared to the rest of the conservatively treated injuries.

Our study has demonstrated a common pattern of injuries in professional football players in a

Table 1. Total injuries.

Injury Description	Number	Recovery Period (Days)
Hamstring Strain	68	14 (1-87)
Adductor Strain	62	13 (1-97)
Ankle Sprain	53	13 (1-89)
Knee Sprain	53	13 (1-85)
Thigh Sprain/Haematoma	38	9 (1-46)
Calf Sprain/Haematoma	37	17 (1-64)
Back Sprain	31	19 (2-286)
Achilles Tendonitis	29	14 (1-76)
Fracture/Dislocation	24	40 (1-146)
Rectus Femoris Sprain	23	11 (0-42)
Bone Bruise Foot (Navicular)	14	28 (2-126)
Meniscal Tears (Menisectomy)	9	35 (11-78)
Others	9	46 (3-196)
Haematoma Shin/Leg	8	8 (1-16)
Abdominal Muscle Sprain	7	7 (1-19)
Osteochondral Defect Knee	5	81 (6-195)
Stress Fracture Patella	4	25 (2-73)
Neck Sprain	4	15 (4-38)
Meniscal Tears (Repair)	3	154 (130-193)
ACL Rupture	2	230 (185-274)
Others		
Compartment syndrome	1	13
Rupture Bracoradialis	1	9
Central Disc Prolapse	1	61
Haematoma Elbow	1	7
Ischaemic Foot	1	196
Tibialis posterior Tendonitis	1	6
Partial Tear Achilles tendon	1	84
Sprain Radial Collateral Ligament	1	3
Rupture Long Head Biceps	1	32

premiership football club. Some of these injuries are serious enough to cause a premature end to a young player's career. There appears to be higher incidences of overuse injuries in this study than previously suggested. The time lost due to overuse injuries in football should not be underestimated and these injuries should be included in the definition of football injuries.

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