SURGICAL MANAGEMENT OF OS TRIGONUM AND TALAR SPUR IN SPORTSMEN

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INTRODUCTION

The os trigonum is present in 7.7% (Basmajian 1975) of the population and may be unilateral or bilateral. It is a developmental anomaly, an accessory bone behind the talus and above the calcaneum. Generally it is of no significance. It may however cause trouble, in jumping, ballet and fast bowling where impulsive plantar flexion while weight-bearing is involved. It then behaves "like a nut in a nutcracker" and may limit extreme plantar flexion (Williams 1978) (Figure 1).

Figure 1: Diagram of medial aspect of ankle showing site of Os Trigonum and nipping in plantar flexion.

The patient complains of local pain characteristically when the foot is in plantar flexion, when "springing" off the toes or after hard running (La Cava and Strinchi 1974).

Talar spurs present a similar mechanical problem when they are large. These may be broken off by "springing" movements off the toes when the fragment lodges between the third malleolus of the tibia posteriorly and the calcaneum inferiorly, limiting full plantar flexion. Symptoms are similar to those described above (Williams and Sperryn 1976).

Radiologically the abnormalities are readily seen in lateral views of the ankle joint (Figure 2). The mech-

Figure 2: Lateral radiograph of ankle showing separate Os Trigonum and some impingement exostoses (Footballer's Ankle).

anical interference they cause may be checked by screening.

MANAGEMENT

Conservative measures may be helpful and success from

treatment with short-wave diathermy, ultrasonic therapy, oral anti-inflammatory drugs and local injection with hydrocortisone has been achieved.

For conditions resistant to conservative measures, surgery is effective (Subotnick 1975). In this series removal of the os trigonum or talar spur was performed, and the patients then underwent daily programmes of physiotherapy, weight-training, occupational therapy and remedial exercises. A good range of joint movement, minimal pain and acceptable weight-bearing and joint function allowing resumption of normal training were reached after three to six weeks. The patients were then able to return to successful competition (Table I).

DISCUSSION

Os trigonum and talar spur present a mechanical problem amongst certain athletes.

These conditions must be considered in the differential diagnosis of ankle pain as they require definitive therapy. Misdiagnosis will necessarily lead to persistence of symptoms.

The problem is readily treated, if necessary by surgery, and carries an optimistic outlook with regard to full functional recovery — especially amongst competitive sportsmen and women.

TABLE I

Sex	Age	Sport	Duration of Symptoms	Site of Lesion	Operation	Duration of Rehabilitation	Recovery at end of Rehabilitation	Outcome
1. M	21	Cross Country Runner	1 year	Left Ankle	Excision of talar spur	3 weeks (Comm. 5 days post-op.)	Full R of M Painless	Won National Cross Country Trials 6 weeks later
2. M	24	Rugby	5 years	Left Ankle Right Ankle	Removal of left os trigonum Right talar spur	6 weeks (Comm. 5 days post-op.)	Mild pain and stiffness. Full R of M.	6 months post-op. Playing Rugby. Occasional stiffness.
3. F	25	400m. Runner	5 years	Left Ankle	Os Trigonum removed	4 weeks (Comm. 5 days post-op.)	Full R and M minimal pain	4 weeks later inter-club competition.
4. F	36	Squash	7 years	Left Ankle	Os Trigonum removed	10 days (Comm. 5 days post-op.)	Full R of M Painless	Resumed normal competition.
5. M	23	Footballer Squash	3 years	Right Ankle	Os Trigonum and Talar Spur removed. Decompression of Peroneal Tendons	5 weeks (Comm. 5 days post-op.)	Full R of M Painfree	Resumed football Squash at 3 months.
6. M	27	Decathlon	4 years	Left Ankle	Os Trigonum removed	18 days (Comm. 5 days post-op.)	Full R of M Minimal pain	4 months later International Competition. Scored personal best in event. Olympic selection.
7. M	17	Bowler (Cricket)	2 months	Left Ankle	Talar spur excised	11 days (Comm. 5 days post-op.)	Full R of M Painfree	2 weeks post-op. playing cricket.

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