

MANAGING STRESS FRACTURES IN FOOTBALL

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Stress fractures in football are being increasingly recognised. The UEFA study published in 2012 showed an injury incidence of 0.04/1,000 hours. Therefore a team of 25 players could expect a stress fracture every third season.

The most common stress fracture in this study was the fifth metatarsal.

The majority of stress fractures require no specific treatment other than rest from the aggravating activity, correction of predisposing factors and graduated return to activity. However certain stress fractures require specific management. These include the common fifth metatarsal fracture as well as navicular and talus, anterior tibial, neck of femur and pars interarticularis.

The diagnosis of a stress fracture is primarily a clinical one with pain on activity and local bony tenderness the key factors. Imaging of stress fractures has evolved over time. Initially X rays were used but findings were inconsistent and often delayed. A combination of isotope bone scan and Computed Tomography (CT) scan has proven sensitive and specific, but associated with a considerable degree of radiation exposure. More recently Magnetic Resonance Imaging (MRI) has become the investigation of choice in the diagnosis of stress fractures.

There is considerable confusion surrounding fractures of the fifth metatarsal. There are three main types of fractures, the avulsion fracture of the tuberosity at the base of the bone, the Jones' fracture at the junction of the metaphysis and diaphysis, and the true stress fracture of the metaphysis. The avulsion fracture can be treated conservatively, while the Jones' and stress fractures can either be treated conservatively or operatively with a screw across the fracture. In professional footballers these fractures are usually treated surgically with good results.

Navicular fractures are less common, but have severe implications as they are associated with prolonged recovery times. Management of these fractures is also controversial with advocates of weightbearing rest, cast immobilisation, and screw fixation. Professional athletes tend to opt for surgical fixation, but the evidence is not convincing.

Time for return to play for most straightforward stress fracture is 6-8 weeks. Athletes are always looking for ways of accelerating healing of stress fractures. Various treatments have been proposed including electrical stimulation, Low Intensity Pulsed Ultra-Sound (LIPUS), and shock wave therapy. Proposed drug treatments include Non Steroidal Anti-Inflammatory Drugs (NSAIDs), bisphosphonates and parathyroid hormone.

Can we prevent stress fractures? Load management is the key factor in prevention, but the role of Vitamin D in prevention of stress fractures has also been extensively investigated.