

Hallux rigidus

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Hallux rigidus is a painful condition of the hallux MTP joint characterised by loss of motion, especially in dorsiflexion, and osteophyte formation on the dorsum and sides of the joint (Figure 41.4). Hallux valgus /uni25CF /uni25CF /uni25CF /uni25CF In adults there is often a history of trauma or repetitive microtrauma (sport) but, occasionally , there is a strong family history of the condition. Gout and rheumatological conditions may present in this way . Patients complain of stiffness and pain on weight-bearing. The most effective non-operative treatment is provision of a stiff-soled shoe with a deep toe box or a rocker-soled shoe, which are now available on the high street. The mainstays of surgical management are injection/ manipulation, cheilectomy (a radical debridement and excision of the part of the joint blocking movement), fusion and interposition arthroplasty (Keller-type procedure or silicone inter position). Prosthetic arthroplasty , with hemi-, total, inter position or spacer arthroplasty , is available but many prostheses have been withdrawn because of high failure rates and few series extend beyond 9 years. Newer prosthetic inserts with claimed joint-preserving capabilities similarly fail to show advantages with regards to pain and have a high revision/reoperation rate but are still preferred by some who wish to retain mobility at MTP1 in the short to medium term. Fusion is for the severely affected and is an effective means of abolishing pain, but affects the biomechanics and some patients are left with intractable pain beneath the sesamoids. A fusion will still usually allow sports participation. Summary box 41.4

Hallux rigidus /uni25CF /uni25CF /uni25CF Sesamoid/sesamoid complex problems Turf toe Acute injuries (turf toe) can be managed non-operatively or surgically depending on the grade of the injury and the occupation of the patient. Grade 4 acute rupture may require surgery . Turf toe is a plantar plate disruption usually from hyper extension injuries at MTP1 and may involve sesamoid fractures. Low-grade injuries can be treated non-operatively Albert Henry Freiberg , Professor of Orthopaedic Surgery , University of Cincinnati, Cincinnati, OH, USA, gave his account of this condition in 1926. Thomas George Morton , 1835–1903, surgeon, Pennsylvania Hospital, Philadelphia, PA, USA, described this condition in 1876. athletes (see Chapter 36). Chronic conditions range from stress fracture to avascular necrosis (AVN) and sesamoiditis but are probably all the same phenomenon. Management includes offloading with orthotics, injections of steroids and, rarely , shaving/excision. Excision surgery carries a high risk. Lesser toe deformities Hammer, mallet and claw toes are frequent and are usually nonindicative but may be secondary to other deformities in the foot or to underlying neurological disease. Nonoperative treatment involves appropriate padding and footwear modification. For symptomatic flexible deformities soft-tissue surgery such as flexor/extensor tenotomies with/without capsulotomy is usually adequate, but for fixed deformities bony procedures are required such as interposition arthroplasty , fusion or excision arthroplasty . Isolated lesser toe MTP extension/subluxation may result from a ruptured plantar plate at MTP joints and repair techniques have evolved recently , but the results are moderate at best and the trend is back to non-operative management where possible. Ultrasound and magnetic resonance imaging (MRI) are now well established for these injuries. - Freiberg's disease Freiberg's disease (Figure 41.5) is an ischaemic necrosis of the epiphysis, resulting in pain

and swelling of the joint. It will often settle with rest. Reshaping osteotomies are described, or excision of the proximal phalangeal head for severe adult cases with joint destruction. Excision of the whole metatarsal head should never be performed. Morton's neuroma and metatarsalgia
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common digital nerve, most commonly between the third and fourth metatarsal heads and the second/third and is usually secondary to other forefoot pathology . The diagnosis is confirmed by ultrasound or MRI. Non operative treatments include advice about footwear, an orthosis (premetatarsal dome) to splay the metatarsal heads or an injection of steroids. Cryotherapy and even alcohol injections have been reported. Surgery involves resection (the affected toes will be permanently partly hemi-numb if the nerve is removed) but this is not without risk of patient dissatisfaction, pain and recurrence, with around 5% reporting bad outcomes, often permanent. European colleagues often simply transect the intermetatarsal ligament instead. Summary box 41.5 Morton's neuroma /uni25CF /uni25CF /uni25CF Stress fracture This may occur following sport or may be incipient. It usually presents in the forefoot and may mimic Morton's neuroma or metatarsalgia. An unexplained aetiology might require biochemical or biomechanical evaluation. Forefoot fractures can usually be managed non-operatively . Stress fractures may occur in any bone. Those of the navicular, talus and tibial sesamoid often present with vague symptomatology but early diagnosis with MRI and management are essential with immediate offloading and protection with early fixation - if required, urgently - if a full fracture is seen developing. Vague, poorly defined midfoot pain in an athlete or military recruit mandates urgent scanning and offloading. Follow-up investigation of bone metabolism/density and exclusion of myeloma may be required.

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Hallux rigidus /uni25CF /uni25CF /uni25CF Sesamoid/sesamoid complex problems Turf toe

Acute injuries (turf toe) can be managed non-operatively or surgically depending on the grade of the injury and the occupation of the patient. Grade 4 acute rupture may require surgery. Turf toe is a plantar plate disruption usually from hyperextension injuries at MTP1 and may involve sesamoid fractures. Low-grade injuries can be treated non-operatively

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Freiberg's disease (Figure 41.5) is an ischaemic necrosis of the epiphysis, resulting in pain and swelling of the joint. It will often settle with rest. Reshaping osteotomies are described, or excision of the proximal phalangeal head for severe adult cases with joint destruction. Excision of the whole metatarsal head should never be performed. Morton's neuroma and metatarsalgia

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