

Ankle And Foot Pain Protocols

1. Patient Group

Adults aged 18 years and over with routine ankle and foot problems.
Patients who have had recent surgery should be referred directly to
Secondary Care

2. Diagnostic Triage and Management Guidelines

Perform diagnostic triage to exclude serious pathology.
See Section 1 for Triage and Management Guidelines

C O N T E N T S

HALLUX LIMITUS

HALLUX ABDUCTO VALGUS

MARCH FRACTURE

FREIBERGS INFRACTION

MORTONS NEUROMA

DORSAL NERVE ENTRAPMENT

PLANTAR FASCITIS

PLANTAR CALCANEAL BIRSITIS

TARSAL TUNNEL SYNDROME

SINUS TARSI SYNDROME

PERSONEAL TENOSYNOVITIS

ACHILLES TENDONITIS

HAGLUND'S DEFORMITY

Diagnostic Triage	Management Guidelines
<p>Hallux Limitus</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Osteoarthritic condition characterised by absent or minimal dorsiflexion of the Hallux on the first metatarsal • When the joint ankyloses it tends to become asymptomatic • On Hallux dorsiflexion jamming occurs which initiates the cartilage damage of early Hallux Rigidus • Severe sharp shooting pain on activity • If severe, patient may limp • If functional Hallux Limitus, usually normal passive first metatarsophalangeal joint range of movement on examination • May be osteophytic enlargement <p><u>Differential Diagnosis</u></p> <ul style="list-style-type: none"> • Gout • Early Rheumatoid Arthritis 	<p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Strapping • Orthotics • Footwear advice • Physiotherapy <p><u>Second Line Management:</u></p> <ul style="list-style-type: none"> • Surgery – arthrodesis exostectomy arthroplasty

Diagnostic Triage	Management Guidelines
<p>Mortons Neuroma (Plantar Digital Neuritis)</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Intermittent sharp neuralgic pain in the forefoot • Usually between the 2/3, 3/4 metatarsal heads • More prevalent in women 4:1 • Early – altered sensation/burning/tingling (paraesthesia) • Later – severe episodic sharp lancinating pain on weight bearing. Tends to increase in severity • Footwear related – tight shoes – pain on walking relieved by removing shoes and massaging foot • No visible abnormality • May be localised sweating • Limping • Unilateral, bilateral, multiple. <p><u>Test:</u> “Mulder’s Click” Compress the mets together in Transverse Plane and push up on affected met head – painful, palpable click, not a reliable test. Pain may also be elicited by pressing in the plantar digital area</p> <p><u>Differential Diagnosis:</u></p> <ul style="list-style-type: none"> • Bursitis • Cyst • RA • Fatigue fracture of met. neck • 	<p><u>Investigations:</u></p> <p>None routinely required. Bloods if a systemic cause is suspected</p> <p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Biomechanical cause – refer to Podiatry for orthotic intervention and footwear advice • Refer to rheumatology if systemic cause suspected • Steroid injection. This may be available locally, or consider referral to MSK Tier 2 service <p><u>Second Line Management:</u></p> <ul style="list-style-type: none"> • If symptoms persist consider investigations – MRI scan • Refer to Orthopaedics for surgical excision <p><u>Results of Surgery:</u></p> <p>Problem resolved = 80% No improvement > 10% Remainder fair with some residual symptoms</p>
<p>Dorsal Nerve Entrapment</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Sup. Peroneal nerve • Deep peroneal nerve • Sural nerve • Pain/paraesthesia/numbness over the dorsum • Footwear – tight shoes/tight lacing • Abnormal pronation • Nerve damage by trauma/surgery • Oedema of foot 	<p><u>Management:</u></p> <ul style="list-style-type: none"> • Careful history • Change footwear/lacing tension • Orthoses if required • Exclude other causes of altered sensation, e.g. diabetic neuropathy, spinal nerve entrapment

Diagnostic Triage	Management Guidelines
<p>Plantar Fasciitis</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Localised point of deep pain or tenderness over the proximal attachment of the plantar fascia into the medial tubercle of the calcaneum • Onset often insidious • Usually no pain on squeezing the side of the calcaneus • Pain – shooting, aching, burning • First step pain in the morning and on weight bearing after rest • Pain eases after a period of weight bearing • Pain on full dorsiflexion and passive extension of the toes • Limping, if severe • Altered foot biomechanics • Excessive standing or walking may be a predisposing factor • Over use – sports • Obesity <p><u>Differential Diagnosis</u></p> <ul style="list-style-type: none"> • Rheumatoid arthritis • Reiters • Metabolic bone disorder – osteomyelitis, pagets, severe disease • Plantar calcaneal bursitis 	<p><u>Investigations:</u></p> <p>None routinely required. Bloods if a systemic cause is suspected i.e. rheumatoid arthritis, gout, diabetes. If positive, refer to rheumatology</p> <p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Biomechanical problem – refer to Podiatry for a full biomechanical assessment • Advice on footwear/lifestyle • Non-biomechanical problem – refer to physiotherapy • Consider NSAIDs • Referral to Dietician if weight a factor <p><u>Second Line Management:</u></p> <ul style="list-style-type: none"> • Steroid injection (maximum of 2). This may be available locally, or consider referral to MSK Tier 2 service • Night splints • Surgical opinion
<p>Plantar Calcaneal Bursitis (Policeman's Heel)</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Inflammation of the adventitious bursa inferior to the medial calcaneal tubercle • Throbbing pain on palpation and when the foot is dependant • Swelling – sometimes slight 'doming' of the fat pad, pad may feel thicker than on the non-affected heel • Trauma – sports, occupation • Shearing stress • Obesity • Rheumatoid arthritis • Depletion of the fibro-fatty pad • Abnormal pronation 	<p><u>Management:</u></p> <ul style="list-style-type: none"> • Determine the cause and minimise • Rest • Referral to physiotherapy • Orthotic intervention • Referral to Dietician, if appropriate

Diagnostic Triage	Management Guidelines
<p>Tarsal Tunnel Syndrome</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Nerve entrapment of the tibial nerve or its branches in the osseo-fibrous tarsal tunnel posterior to the medial malleolus – impaired conduction • Onset usually insidious • Sharp burning pain and paraesthesia plantar medial rearfoot – may extend to the hallux • Worse with activity • May radiate into the leg • Sensation of ‘fullness’ or ‘tightness’ or sensation of warmth in the medial arch • Night pain • Biomechanical cause due to abnormal pronation or overuse • Trauma to medial ankle – sprains, oedema • Space occupying lesions in the tarsal tunnel e.g. neuroma, fibroma, synovial cyst • Inflammatory cause – tenosynovitis e.g. rheumatoid arthritis <p><u>Test:</u> Positive Tinnel’s Sign: Pronate the foot, then tap the medial side of the foot posterior to the medial malleolus – positive sign if a tingling sensation is felt. Valliax phenomenon – pain into the leg</p> <p>Differential Diagnosis</p> <ul style="list-style-type: none"> • Metatarsalgia (pain in forefoot) • Plantar fasciitis (pain in rearfoot) • Nerve ischaemia • Spinal nerve impingement • Diabetic neuropathy 	<p><u>Investigations:</u></p> <p>None routinely required. Bloods if a systemic cause is suspected.</p> <p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Biomechanical cause – refer to Podiatry for orthotic intervention and footwear advice • Physiotherapy <p><u>Second Line Management:</u></p> <ul style="list-style-type: none"> • Refer for surgery – decompression of the tarsal tunnel • Excision of tumours/masses
<p>Sinus Tarsi Syndrome</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Pain over the dorso-lateral aspect of the foot near the lateral opening of the sinus tarsi • Recurrent lateral ankle sprain • Large rearfoot varus • Cavo varus foot • Subtalar joint osteoarthritis • May be ligament damage/fibrosis at the lateral opening of the sinus tarsi • Pain at the site on motion • Pain on palpation, anterior to the tip of the lateral malleolus 	<p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Biomechanical cause – refer to Podiatry for orthotic intervention • Physiotherapy • Steroid injection. This may be available in primary care, or consider referral to MSK Tier 2 service <p><u>Second Line Management:</u></p> <ul style="list-style-type: none"> • Surgical opinion

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<p>Peroneal Tenosynovitis</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • The peroneal tendons are held behind the lateral malleolus by the retinaculum, tendonitis occurs when there is acute or chronic overloading of the peroneal tendons. This occurs when the load applied to the tendon is greater than that which is sustainable • Results in injury and inflammation of the tendon and sheath • Notoriously slow to heal as the blood supply is limited • May occur in dancers • Pain on exercise, usually along the course of the tendon • May be swollen with crepitus • Tenderness distal to the lateral malleolus, along the course of the tendons i.e. may be peroneus longus or brevis • Pain on passive inversion and plantar flexion • Weakness and pain on active eversion • Differentiating between longus and brevis may be difficult. Tenderness on the sole of the foot between the cuboid and the base of the first metatarsal may suggest problems with peroneus longus. Evert the hindfoot actively against resistance to clarify such involvement 	<p><u>Investigations:</u></p> <p>Largely a clinical diagnosis MRI scan to determine whether there is fluid in the tendon sheath</p> <p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Rest, ice, compression and elevation • Biomechanical cause – refer to Podiatry for Orthotic intervention and footwear advice • Refer to Physiotherapy • Non-steroidal anti-inflammatory medication • Steroid injection. This may be available in primary care or consider referral to MSK T2 service <p>If rupture or tear suspected, refer to Secondary Care</p>
<p>Tibialis Posterior Tenosynovitis</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Inflammation of the tendon and/or sheath • Normally occurs in late middle age • Pain on exercise, usually along the course of the tendon • May be some swelling • Tenderness behind the medial malleolus • Pain and weakness on resisted inversion and limited passive eversion • It is important to rule out a ruptured tibialis posterior tendon. In this case the patient may present with vague pain on the medial aspect and a spontaneous flat foot. The hindfoot will be in valgus and the heel will not invert if the patient stands on tiptoe. When looked at from behind the forefoot is abducted. 	<p><u>Management:</u></p> <ul style="list-style-type: none"> • Rest, ice, compression, elevation • Physiotherapy • MRI scan • Biomechanical cause – refer to Podiatry for orthotic intervention and footwear advice • Steroid injection. This may be available in primary care, or consider referral to MSK Tier 2 service <p>If it is suspected that the tendon is ruptured, refer to Secondary Care</p>

Diagnostic Triage	Management Guidelines
<p>Achilles Tendonitis</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Inflammation of the Achilles tendon and/or the tendon sheath • Unilateral/bilateral • Acute/chronic • An overuse injury of the Achilles tendon with a spectrum of pathologies ranging from inflammation to degenerative changes in the tendon • Pain, tenderness and swelling over the Achilles tendon • Increased with passive dorsiflexion of the foot, resisted plantar flexion or heel raising • Crepitus • Tendon nodules • Abnormal pronation • Pes cavus <p><u>Differential Diagnosis:</u></p> <ul style="list-style-type: none"> • Calcaneal bursitis – swelling evident on either side of the tendon • Pain increased with plantarflexion • Gout • Rheumatoid arthritis and sero negative arthropathies 	<p><u>Investigations:</u></p> <p>None routinely required. Bloods if a systemic cause is suspected.</p> <p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Biomechanical cause – refer to Podiatry for orthotic intervention • Rest from aggravating activity • Refer to Rheumatology if systemic cause suspected • Refer to physiotherapy • <u>Steroid injection should not be given</u> <p><u>Second Line Management:</u></p> <ul style="list-style-type: none"> • If symptoms persist consider investigations – ultrasound/X-ray • Refer to Orthopaedics for surgical opinion
<p>Haglund's Deformity</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Retro calcaneal exostosis • Over growth of bone on the posterior lateral aspect of the calcaneus • Often has an associated adventitious bursa • Often callused or the skin is shiny and red due to shoe trauma or associated with a bursa • Inherited tendency • Shear and pressure from footwear • Cavus/inverted rearfoot types 	<p><u>Management:</u></p> <ul style="list-style-type: none"> • Biomechanical cause – refer to Podiatry for Orthotic intervention • Footwear advice • Surgical opinion