Ankle Pain

CHAPTER 34

Sportspeople, particularly ballet dancers, footballers and high jumpers, may complain of ankle pain that is not related to an acute ankle injury (Chapter 33). Clinical management is simplified if the presentations are further divided into:

- medial ankle pain
- lateral ankle pain
- anterior ankle pain.

Note that the region that might be considered 'posterior ankle' pain is defined as the 'Achilles region' in this book (Chapter 32).

Medial ankle pain

Clinical experience suggests that the most common cause of medial ankle pain is tibialis posterior tendinopathy. Posterior impingement syndrome of the ankle (Chapter 32) may occasionally present as medial ankle pain. Flexor hallucis longus tendinopathy is not uncommon and may occur together with posterior impingement syndrome. Tarsal tunnel syndrome, in which the posterior tibial nerve is compressed behind the medial malleolus, may present as medial ankle pain with sensory symptoms distally. Causes of medial ankle pain are listed in Table 34.1. The anatomy of the region is illustrated in Figure 34.1.

History

In patients with medial ankle pain there is usually a history of overuse, especially running or excessive walking (tibialis posterior tendinopathy), toe flexion in ballet dancers and high jumpers (flexor hallucis longus tendinopathy) or plantarflexion in dancers and footballers (posterior impingement syndrome). Pain may radiate along the line of the tibialis posterior tendon to its insertion on the navicular tubercle or into the arch of the foot with tarsal tunnel syndrome. Sensory symptoms such as pins and needles or numbness may suggest tarsal tunnel syndrome.

Examination

Careful palpation and testing of resisted movements is the key to examination of this region.

Table 34.1 Causes of medial ankle pain

Common	Less common	Not to be missed
Tibialis posterior tendinopathy Flexor hallucis longus tendinopathy	Medial calcaneal nerve entrapment Calcaneal stress fracture Tarsal tunnel syndrome Talar stress fracture Medial malleolar stress fracture Posterior impingement syndrome (Chapter 32) Referred pain from lumbar spine	Navicular stress fracture (Chapter 35) Complications of acute ankle injuries (Chapter 33) Complex regional pain syndrome type 1 (following knee or ankle injury)

Brukner-B-25_36.indt 632 5/5/06 4:10:17 PM

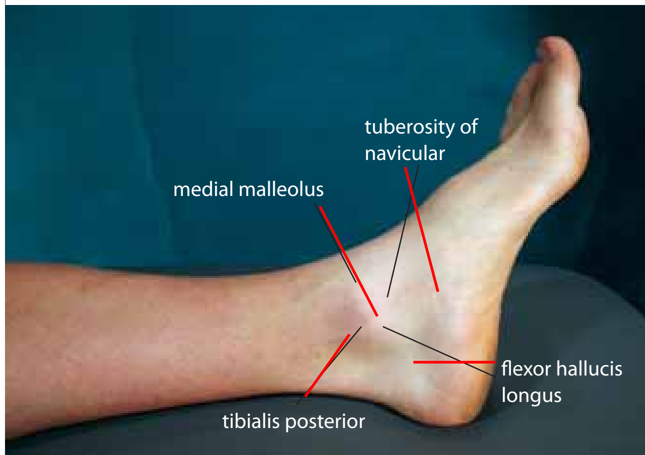
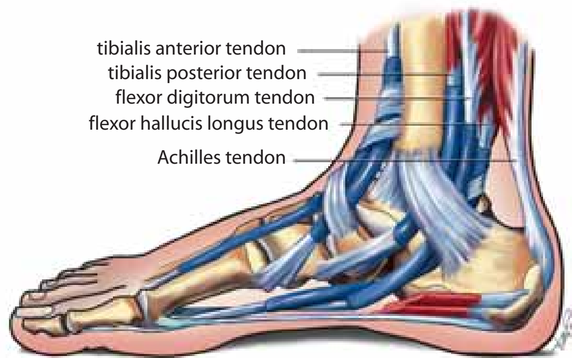


Figure 34.1 Medial aspect of the ankle

(a) Surface anatomy



(b) Anatomy of the medial ankle

1. Observation
   (a) standing
   (b) walking
   (c) supine
2. Active movements
   (a) ankle plantarflexion/dorsiflexion
   (b) ankle inversion/eversion
   (c) flexion of the first metatarsophalangeal joint
3. Passive movements
   (a) as for active
   (b) subtalar joint
   (c) midtarsal joint
   (d) muscle stretches
      (i) gastrocnemius
      (ii) soleus
4. Resisted movement
   (a) inversion (Fig. 34.2a)
   (b) first toe flexion (Fig. 34.2b)
5. Functional tests
   (a) hop
   (b) jump
6. Palpation
   (a) tibialis posterior tendon (Fig. 34.2c)
   (b) flexor hallucis longus
   (c) navicular tubercle
   (d) ankle joint
   (e) midtarsal joint
7. Special tests
   (a) Tinel's test (Fig. 34.2d)
   (b) sensory examination (Fig. 34.2e)
   (c) biomechanical examination (Chapter 5)
   (d) lumbar spine examination (Chapter 21)

Figure 34.2 Examination of the patient with medial ankle pain

(a) Resisted movement—inversion (tibialis posterior)

(b) Resisted movement—toe flexion (flexor hallucis longus)

Brukner-B-25_36.indt 633 5/5/06 4:10:18 PM