

DEFINITION

- 1 A calcaneal spur is a bony spike (*traction exostosis*) growing anteriorly from the anterior edge of a calcaneal tuberosity, usually the medial tuberosity, and contained within the insertion of the plantar fascia and its thickened part, the long plantar or "spring" ligament, into the calcaneus (heel bone).

CLINICAL FEATURES

- 2 The common presenting symptoms of the **calcaneal spur syndrome** are heel pain and tenderness over the insertion of the plantar fascia into the calcaneus, but it is thought that these features are not due to the spur 'per se' but are secondary to an underlying cause. The syndrome may present before the development of an actual spur and may be unilateral or bilateral.
- 3 When present, pain is worst on walking, sometimes after a period of rest (poststatic dyskinesia) or on prolonged standing and is generally held to result from the underlying cause of the spur rather than the spur itself. The onset of pain may be triggered by trauma. There may be slight soft tissue swelling.
- 4 The pain may diminish as the spur enlarges, possibly due to adaptive changes in the foot. In a small minority of cases, an adventitious bursa develops and becomes inflamed (inferior calcaneal bursitis); the pain then has a throbbing character.
- 5 Well-defined calcaneal spurs can be seen on X-ray as often in normal subjects as in patients with heel pain, but spurs of fluffy appearance indicate the presence of an inflammatory process. Pain arising from inflammation at an interface between bone and a ligament or tendon is sometimes termed *enthesitis*.
- 6 Calcaneal spur syndrome is treated by rest, the use of resilient heel pads, non-steroidal anti-inflammatory drugs, local anaesthetic or steroid injections and, where appropriate, treating any underlying condition. Surgery is only very rarely required in the most resistant cases.

AETIOLOGY

- 7 Constant, excessive anterior traction on the plantar fascia can lead to development of spurs by detaching the periosteum from bone. This may happen with shortened fascia, pes planus, postural deformation by ill-fitting shoes or traumatic detachment of the fascia.
- 8 Acute trauma, e.g. certain sports injuries, may precipitate symptoms with an existing calcaneal spur.
- 9 Inflammatory causes of the calcaneal spur syndrome include attacks of plantar fasciitis (which may be caused by repeated plantar trauma as in athletic activity), rheumatoid arthritis, gout and seronegative arthropathies including ankylosing spondylitis, psoriatic arthritis, arthritis associated with inflammatory bowel disease and Reiter's syndrome.

CONCLUSION

- 10 A calcaneal spur is a bony prominence extending from the heel bone. It is not necessarily symptomatic. The classical symptoms of **calcaneal spur syndrome**, which may occur without the presence of an actual spur, are pain and tenderness on the undersurface of the heel.
- 11 The syndrome may result from trauma, plantar fasciitis, the wearing of ill-fitting footwear or certain inflammatory arthropathies.

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