Available online at www.sciencedirect.com
ScienceDirect
Foot and Ankle Surgery 13 (2007) 207–213
FOOT AND ANKLE SURGERY
www.elsevier.com/locate/fas

Case report

Soft tissue chondroma compression—A unique cause of tarsal tunnel syndrome: A case report and review of the literature

Mazen Hamoui *, François Canovas, Mazen Ali, Arnaud Largey, François Bonnel

Centre Hospitalier Universitaire, Hopital Lapeyronie, service de chirurgie orthopédique et traumatologique III, 371 avenue du doyen Gaston Giraud, 34295 Montpellier Cedex 5, France

Received 17 October 2006; received in revised form 18 June 2007; accepted 18 June 2007

Abstract

Posterior tibial nerve entrapment can be caused by extrinsic compression in the tarsal tunnel. We report a nerve compression due to a chondroma in the tarsal tunnel. To our knowledge it is a very rare cause of tarsal tunnel syndrome.

Keywords: Tarsal tunnel; Posterior tibial nerve; Space occupying lesion; Chondroma

A 56-year-old white man of 70 kg, 172 cm, very active especially with hiking and employed by the railway company, presented with left ankle pain on the medial side with numbness on the plantar surface of the foot of 2 months duration. There was no history of trauma. The pain was worse at night. The patient 4 years earlier underwent surgery for resection of a colon tumour. He had no previous neurological diseases, no family history of neuropathy, no diabetes mellitus or viral infection. The initial physical examination revealed pain on the medial side of the left tarsal tunnel increased by foot dorsiflexion and eversion. There was loss of light touch sensation along the posterior tibial nerve with numbness and paresthesia on the medial plantar aspect of the foot. A painful mobile mass was palpable in the medial retromalleolar region. There was no muscle atrophy of the leg and the foot. Strength was normal in all the lower leg muscle groupas. No abnormalities of the hindfoot and forefoot were noted. The straight leg-raising test was normal and there was a negative sciatic stretch.

The Tinel sign was positive over the posterior tarsal tunnel.

1. Imaging interpretation

Radiographs of the left ankle were normal.

Electromyography and nerve conduction were not performed. Ultrasound showed a hypoechogenic area (nodule) of 8 mm × 5 mm situated at the superior portion of the medial cortex of the calcaneus encroaching the posterior tibial nerve (Fig. 1).

Magnetic resonance imaging showed the presence of a mass of low signal intensity on T1-weighted images and high signal intensity on T2-weighted images, with an enhancement of the periphery of the mass after intravenous injection of gadolinium. The mass was situated along the posterior tibial nerve (Fig. 2).

2. Surgical procedure

Under regional anaesthesia and tourniquet, we performed surgical removal of the mass.

A curved skin incision was made over the tarsal tunnel (posteromedial approach) 1 cm distal, 3–4 cm long to the medial malleolus, the flexor retinaculum was cut and the underlying posterior tibial nerve was identified. An extra-articular mass arising from the tibialis posterior tendon sheath at the level of the posterior talocalcaneal joint was

* Corresponding author. Tel.: +33 616774352/467338726; fax: +33 467339594.
E-mail address: mizo@europe.com (M. Hamoui).

1268-7731/$ – see front matter
doi:10.1016/j.fas.2007.06.002

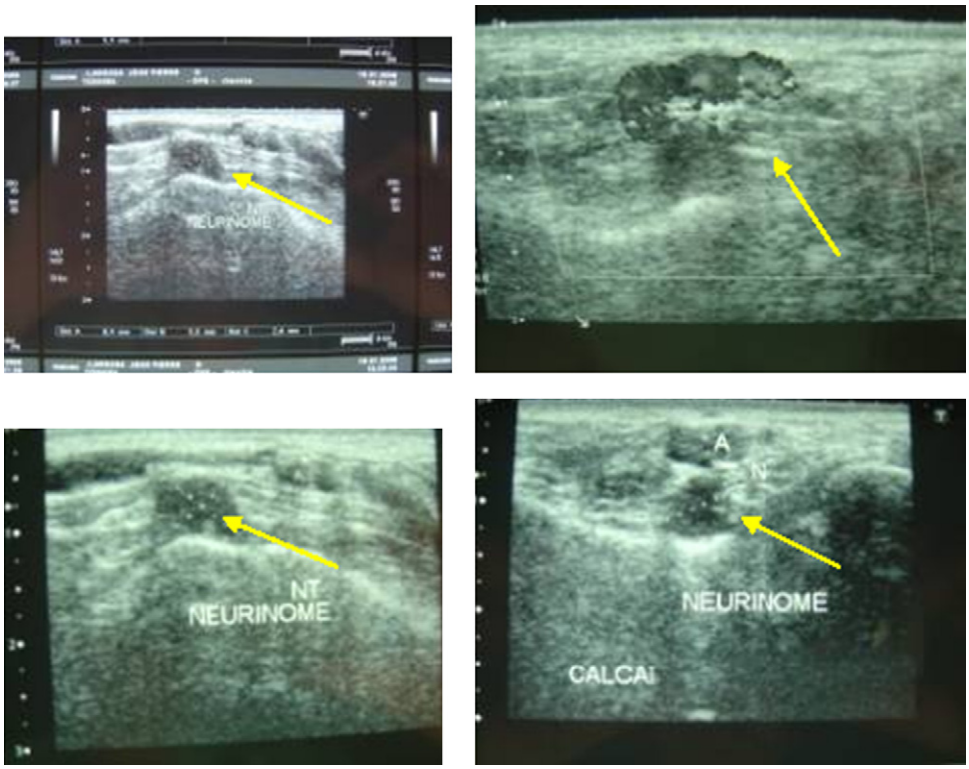

Fig. 1. Ultrasound demonstrating a hypoechogenic area, the diagnosis presumed was a neurilemomma.

found. This mass, 5 mm × 8 mm was white multilobulated, of hard consistency, free of attachment with the neighbouring soft tissues, and sent for histological examination (Fig. 3).

3. Histology interpretation

There was synovial and tenosynovial tissue containing multiple white cartilage well differentiated nodules. The

Fig. 2. MRI showing a low signal intensity on T1-weighted images and high signal intensity on T2-weighted images, with an enhancement of the periphery of the mass after intravenous injection of gadolinium.