

44 QUESTION

HOW DO YOU TREAT TARSAI TUNNEL SYNDROME? WHAT ARE YOUR INDICATIONS FOR SURGICAL DECOMPRESSION?

Christopher P. Chiodo, MD

Tarsal tunnel syndrome is an entrapment neuropathy of the posterior tibial nerve at the level of the medial ankle. Here, the nerve passes through a fibro-osseous space bordered by the tibia anteromedially and the talus and calcaneus posterolaterally. It is covered by the flexor retinaculum, also known as the lacinate ligament.

The first step in treating tarsal tunnel syndrome is to establish and confirm the diagnosis. A diagnostic triad has been described consisting of the history, physical examination, and neurodiagnostic studies. The most important component of the history is localization of symptoms—whether paresthesias, numbness, or radiation pain—in the distribution of the tibial nerve. For the physical examination, a Tinel’s test may be positive with manual percussion along the tarsal tunnel. With regard to neurodiagnostic studies, the diagnostic sensitivity of sensory-nerve conduction studies ranges from 90% to 100%.¹ Mixed-nerve conduction studies have a sensitivity of 86% and superior specificity, and therefore are also helpful.²

In addition, I routinely obtain a magnetic resonance (MR) scan in all patients. Frey and Kerr reported abnormal findings in 85% of patients with tarsal tunnel syndrome.³ MR can detect an underlying neoplastic process, which should always be considered in the differential diagnosis (Figure 44-1). It can also detect other diagnoses, such as varicosities, tenosynovitis, an accessory soleus muscle, and posterior tibial tendon pathology.

I usually attempt some form of nonoperative treatment. If there is any hindfoot malalignment, then appropriate orthoses are prescribed with medial or lateral hindfoot posting. While hindfoot valgus can put the posterior tibial nerve under tension, hindfoot varus may result in nerve compression. If tenosynovitis is felt to play a role, a trial of nonsteroidal anti-inflammatory medications, immobilization, and/or therapy with iontophoresis may be attempted. Lastly, a single steroid injection into the tarsal tunnel may be considered. I perform this only occasionally and with great caution, given the proximity of the nerve to vascular structures and load-bearing tendons.