

Tarsal Tunnel Syndrome

Tarsal Tunnel Syndrome is a condition caused by the compression of the tibial nerve in the tarsal tunnel. This condition is akin to Carpal Tunnel Syndrome of the upper extremity in which the median nerve is compressed by the transverse carpal ligament in the wrist. In Tarsal Tunnel Syndrome, the tibial nerve is compressed by the flexor retinaculum, a tough area of tissue that holds the tendons in place along the inside part of the ankle. The compression of the tibial nerve can be caused by: prominent veins, a ganglion cyst, bony spurs, extra tendon (accessory flexor digitorum longus muscle), a lipoma or other masses within the tarsal tunnel. The condition can be associated with a flatfoot or valgus position of the heel.

Patients with Tarsal Tunnel Syndrome complain of medial or inside ankle pain that radiates to the bottom of the foot. Sometimes the pain can radiate into the calf, as well. Other patients report foot numbness. A physical exam can demonstrate a positive Tinel sign behind the medial malleolus (tapping on the area of the nerve on the inside part of the ankle causes shooting pain). Some patients have increased pain with manual compression over the tarsal tunnel. Some patients may have atrophy or loss of muscle in the foot. Sensation can be decreased along the bottom or plantar aspect of the foot.

Electromyography (EMG) and nerve conduction tests can be helpful in the diagnosis of Tarsal Tunnel Syndrome. A recent study reported that 81% of patients with tarsal tunnel syndrome had abnormal EMG studies. An MRI can be used to identify space-occupying structures within the tarsal tunnel as well as the specific site of compression of the tibial nerve.

Many patients improve with rest, NSAIDS (medications such as Advil) and possibly orthotics (shoe inserts). Surgery is recommended for patients with persistent symptoms and a positive EMG test (objective evidence of compression of the tibial nerve). During a Tarsal Tunnel Release surgery, an incision is made along the medial aspect of the ankle and the tibial nerve and its branches are decompressed allowing the cause of the compression to be removed.

To make an appointment with Dr. Zell, call 443-643-3130.