Tibialis Posterior Tendon Dysfunction

Tendons connect muscles to bones. One of the most important tendons in the leg is the Tibialis Posterior tendon. This tendon starts in the calf, stretches down behind the inside of the ankle and attaches to bones in the middle of the foot. It helps hold your arch up and provides support as you step off on your toes when walking. If this tendon becomes inflamed, over-stretched or torn, you may experience pain on the inner ankle and gradually lose the inner arch on the bottom of your foot, leading to flatfoot.

Symptoms:

- Pain and swelling on the inside of the ankle
- Loss of the arch and the development of a flatfoot
- Gradually developing pain on the outer side of the ankle or foot
- Weakness and inability to stand on the toes
- Tenderness over the midfoot, especially when under stress during activity

Risk Factors:

Posterior tibial tendon dysfunction frequently occurs in women over 50 years of age and may be due to an inherent abnormality of the tendon. But there are several other risk factors, including:

- Obesity
- Diabetes
- Hypertension

- Previous surgery or trauma, such as an ankle fracture on the inner side of the foot
- Local steroid injections
- Inflammatory diseases (Rheumatoid arthritis, Psoriasis etc)

The tendon may also become inflamed if excessive force is placed on the foot while running or jumping.

Diagnosis:

The diagnosis is based on both a history and a physical examination. As the condition progresses, the front of the affected foot will start to slide to the outside. From behind, it will look as though you have "too many toes" showing. You may also be asked to stand on your toes or to do a single heel rise: stand with your hands on the wall, lift the unaffected foot off the ground, and raise up on the toes of the other foot. Normally, the heel will rotate inward; the absence of this sign indicates posterior tibial tendon dysfunction. Your doctor may request X-rays, an ultrasound or a magnetic resonance image (MRI) of the foot.

Too many toe sign on the left side

Treatment:

Without treatment, the flatfoot that develops from posterior tibial tendon dysfunction eventually becomes rigid. Arthritis develops in the hindfoot. Pain increases and spreads to the outer side of the ankle. The way you walk may be affected and wearing shoes may be difficult.

The treatment your doctor recommends will depend on how far the condition has progressed. In the early stages, posterior tibial tendon dysfunction can be treated with rest, nonsteroidal anti-inflammatory drugs such as ibuprofen, and immobilisation of the foot for 6 to 8 weeks with a rigid below-knee cast or boot to prevent overuse. After the cast is removed, shoe inserts such as a heel wedge or arch support may be helpful. If the condition is advanced, your doctor may recommend that you use a custom-made ankle-foot orthosis or support.

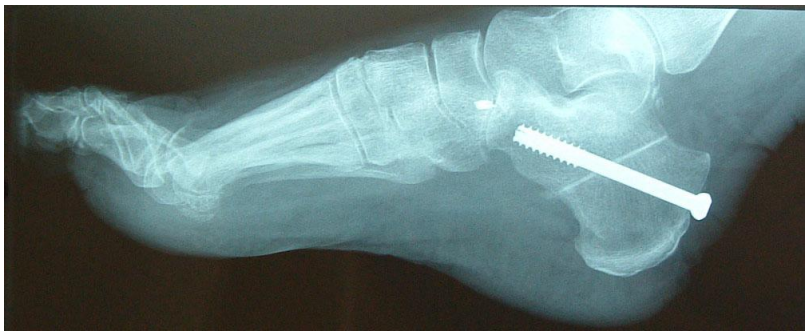
If conservative treatments don't work, your doctor may recommend surgery. Several procedures can be used to treat posterior tibial tendon dysfunction; often more than one procedure is performed at the same time. Your doctor will recommend a specific course of treatment based on your individual case.

Surgical options include:

Tenosynovectomy (Early stage disease)

In this procedure, the surgeon will clean away (debride) and remove (excise) any inflamed tissue surrounding the tendon.

Osteotomy (Middle stage disease)



This procedure changes the alignment of the heel bone (calcaneus).

Tendon transfer (Middle stage disease)

This procedure uses another tendon (Flexor digitorum longus) to repair the damaged posterior tibial tendon.

Arthrodesis (Late stage disease)

This procedure welds (fuses) one or more bones together, eliminating movement in the joint. This stabilizes the hindfoot and prevents the condition from progressing further.