Tibialis Posterior Tendon Dysfunction (Acquired Flatfoot)

The tibialis posterior (TP) tendon is one of the major stabilising structures in the foot. It runs behind the bump on the inside of the ankle (the medial malleolus) and inserts into one of the bones of the instep (navicular). The main functions of the tendon are to support the arch and keep the foot turned inwards when walking. The TP can become damaged by wear and tear or acute trauma.

Initially, pain is felt along the length of the tendon (behind the medial malleolus), but as the problem worsens, deformity becomes apparent, and the foot flattens and turns outwards. Pain may develop on the outside of the ankle and if the deformity continues to worsen over time the joints in the hind foot become affected and can become arthritic. The surgical treatment is complex and depends on the location and severity of damage.

Non-Operative Management

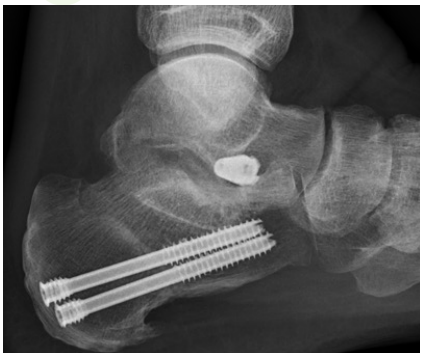
In the early or mild stages of TP tendon dysfunction, simple painkillers, orthotics, and physiotherapy are used. Sometimes this is not sufficient and ankle bracing, or the use of a custom moulded splint is required. If the TP tendon is particularly inflamed, a local steroid injection around the tendon under ultrasound guidance can help to improve symptoms. If these non-operative methods prove inadequate to control symptoms or the problem progresses, surgery may be helpful.

Operative Management

Tibialis Posterior Reconstruction Procedure

In most cases the tendon itself is not repairable and needs to be strengthened by using another tendon, called flexor digitorum longus (FDL). This tendon lies alongside TP at the ankle and bends the small joints of the toes. Other tendons help to carry out this function and so the tendon is not really missed when it is used. This procedure is suitable in the earlier stages of the condition, when the foot remains supple and there is minimal arthritis.

To improve the biomechanics of the tendon transfer, the heel bone is moved towards the inside of the foot (calcaneal osteotomy) and held with one or two screws. In addition, a plug is inserted into the outer portion of the foot (sinus tarsi) to assist in supporting the arch. The plug is sometimes removed in a second operation when the tendon is strong enough, about 6 months after the first operation. This is a small day case operation and recovery is usually swift.



Triple Fusion

In more advanced cases, up to three of the joints in the foot can become arthritic. These joints (subtalar, talo-navicular, and calcaneo-cuboid) are fused and occasionally bone graft is taken from the heel to help with the fusion process. Once the cartilage has been removed from these joints they are fused and held in place using a series of screws, plates or a combination. This is known as a triple fusion. Whilst a fusion procedure may sound daunting, this procedure is the most reliable way of improving pain and straightening the foot in severe cases.

The recovery from tendon reconstruction or fusion surgery is lengthy. It can take a full year until the final outcome is achieved. You will spend six weeks in a cast where you are not permitted to weight bear. Following this, you will be placed into a CAM walker for a further six weeks, in which you can start to bear weight. You may then require an intensive rehabilitation program as directed by your physiotherapist. After three months (once swelling has settled), new insoles are required to assist in supporting the arch.

Risks & Complications

No surgery is risk free. The risks and complications will be assessed and discussed with you. There is always a small risk of infection, blood clots and anaesthetic problems and measures are taken to reduce these. Specific risks include tendon re-rupture or progressive arthritis requiring further surgery, nerve damage resulting in numbness of the foot, wound or bone healing issues, and failure to relieve pain. Despite these risks, a good outcome is expected in 90% of cases.

Recovery Times

Hospital stay	2-3 nights
Rest & elevation	7-10 days
Plaster (non-weight bearing)	6 weeks
Foot swelling	3-6 months
Implant removal (if required)	6 months

Time off work	
Seated	4-6 weeks
Standing	3 months

Result times (pain relief & function)	
Good	3 months
Better	6 months
Best	12 months

This brochure is a brief overview of the surgical management of tibialis posterior tendon dysfunction and not designed to be all-inclusive. If you have any further questions, please do not hesitate to contact your surgeon.

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