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Flatfoot Reconstruction for Tibialis Posterior Tendon Dysfunction

INTRODUCTION

The most commonly torn tendon in middle-aged adults is the posterior tibial tendon. This is the tendon that goes down the inside of the leg inserting on your arch, and allows you to go up on your toes. Many patients who develop a posterior tibial tendon tear have a longstanding flatfoot, and then with repetitive loads over the years, the tendon finally gives out and the flatfoot gets even flatter. Patients typically complain of pain, swelling, and an inability to walk long distances and on their toes. They walk with their foot and toes pointed outwards and the ankle bows inwards.

Non-operative treatment of posterior tibial tendon dysfunction is the use of a brace or orthotic to stabilise the ankle. This is only effective when the foot has no deformity, typically very early on in the disease. The vast majority of patients with posterior tibial tendon dysfunction will need surgical intervention. The surgery consists of replacing your posterior tibial tendon with one of your toe tendons (Do not worry though, as you have two tendons to each of your toes and you will still be able to move your toes) and restoring your arch with some combination of bony procedures. We restore your arch by cutting your heel bone and shifting it over and sometimes using a metal plug to prop up your arch as well. Sometimes we will cut and shift some of the joints on the inside of your midfoot in order to stabilise your arch. The exact combination of procedures required is determined by clinical assessment.

THE PROCEDURE

There are a number of steps to be operation:

1. General anaesthetic
2. Local anaesthetic ankle block
3. Incisions
4. Achilles lengthening (which is often tight)
5. Heel shifted inwards and fixed with a screw
6. Tendon transfer
7. Arthroeresis screw (titanium screw) inserted to protect tendon transfer
at times, with more severe deformities, a Lateral Column Lengthening will be performed instead of an arthroeresis screw
8. Medial Cuneiform osteotomy – wedge of bone taken from undersurface of this bone to create more arch
9. Closure of wound
10. Plaster backslab

RISKS & COMPLICATIONS

Every surgical procedure carries some risk. These risks are largely uncommon and many are rare.

They include:

Wound infection

Anaesthetic complications

Drug allergy

Sensory nerve injury

Deep venous thrombosis/pulmonary embolism

Ongoing pain

Prominent hardware requiring removal

POST OPERATIVE PROTOCOL

You will stay 2 - 4 nights in hospital for post-operative pain relief, observation, and physiotherapy assessment

Weeks 0 - 2: non-weight-bearing in plaster backslab, bloodthinners

End of week 2: wound check, transition into a full fibreglass cast, remain nonweightbearing and on bloodthinners

(If the left foot was operated on and you have an automatic car, you may now drive)

End of week 6: Cast removed, xray performed to assess healing, weightbearing in a camboot commences, home-based physio programme

End of week 12: Boot removed and transition into normal shoes, formal physio starts, can resume long distance walking when comfortable

Ongoing recovery till 6 – 9 months

PROBLEMS AND CONCERNS

If you have any queries or concerns, contact Dr. Ling's rooms on 9650 4782 between business hours. After hours or on weekends, if your matter is urgent, please present to the Emergency Department at Prince of Wales Hospital if you are an adult, or Sydney Children's Hospital if the patient is your child, and you will be seen by the Orthopaedic Registrar on call, who will contact Dr Ling directly