

## Acquired Adult Flat Foot Deformity (Tibialis Posterior Tendonopathy)

### Additional information supporting pathway

#### Common presentations:

- Painful flat foot, foot 'rolling inwards'
- Medial ankle pain
- Occasional lateral ankle pain 'impingement'
- 'Going over on ankle' (50's)
- Occasional mid-foot pain
- Lost 'spring' in step
- 75% have asymptomatic flat foot on opposite side
- Some patients will report acute injury preceding flat foot deformity

The group agreed that management of this condition and overall 'ownership' lies with the ESP Podiatrist. The MSK service should be 1<sup>st</sup> point of contact for all patients with this condition. Other AHP involvement should occur alongside ESP Podiatry

#### Weight Bearing Examination:

- Flat foot:
  - Low instep
  - Valgus / everted heel,
  - Too many toes sign
  - Prominent navicular
- Double Tiptoe Stance:
  - Hind foot should go into varus
  - ? are heels 'windswept'
- Single Tiptoe Stance:
  - Stand patient side on to wall / chair
  - Ensure opposite foot is completely lifted from floor before patient attempts tiptoeing
  - If they can't do it, what is stopping them?
  - Is there an inability to raise heel at all?
  - Can they lift heel off floor but get a midtarsal joint break?
  - Are they able to lift heel with difficulty and in a non-smooth way?
  - Can they do it BUT not repeatedly?

## Non-Weight Bearing Examination:

- Gastrocnemius / Soleus
  - check for tightness
- Tibialis Posterior tendon brings about plantar flexion and inversion of foot
- Active and resisted testing
  - Can patient actively plantarflex and invert foot? Is it painful?
  - Can patient actively plantarflex and invert foot against resistance? Does this provoke pain?
  - Check resisted testing in different positions. Grade strength.
- Examination of Tibialis Posterior tendon for the following:
  - Palpable
  - Thickening
  - Thinning
  - Synovitis
  - Bruising
- Check all other active and resisted muscle testing
- Palpation of joints & assess range of movement
  - Is the hindfoot deformity passively correctable?
  - How is forefoot alignment in relation to rearfoot?
  - If forefoot is in varus, is it correctable?
- Palpate spring ligament, plantar fascia & sinus tarsi.

## Differential Diagnoses:

- Charcot foot
- Plantar fasciitis
- Achilles Tendonopathy

Following assessment, patients usually falls into 3 groups:

- Tibialis Posterior tendonopathy
- Plantar fasciitis
- Arthritis

## Non-surgical Management:

Most patients require a combined approach to management with physiotherapy underpinned by orthotic management of the foot deformity / biomechanics.

Patients with severe or stiff deformities need accommodative orthoses, AFOs or braces & consideration of accommodative prescription footwear. These patients require referral to the Orthotics Service.

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