Talipes (Neonatal Clubfoot) with thanks to Dr Mujahid Hasan and the Paediatric Physiotherapy Team at Whipps Cross University Hospital

Newborn babies can present with one of two types of Talipes:
1. Congenital Talipes Equinovarus (CTEV or fixed/structural Talipes)
2. Positional Foot Problems

Below is a summary table of the differences between the two.

<table>
<thead>
<tr>
<th>CTEV (Structural)</th>
<th>Positional Foot Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Manufacturing”</td>
<td>“Packaging”</td>
</tr>
<tr>
<td>Abnormal Anatomy</td>
<td>Normal Anatomy</td>
</tr>
<tr>
<td>The foot is in equinus, varus, cavus and adductus</td>
<td>Involves forefoot varus/adductus or calcaneovalgus</td>
</tr>
<tr>
<td>Cannot passively correct</td>
<td>Passive correction to at least neutral</td>
</tr>
<tr>
<td>Never resolve spontaneously</td>
<td>Usually resolve spontaneously</td>
</tr>
<tr>
<td>Ongoing paediatric orthopaedic follow-up</td>
<td>Minimal physiotherapy follow-up</td>
</tr>
<tr>
<td>Requires specialist paed ortho referral</td>
<td>No surgery</td>
</tr>
<tr>
<td>Most require tenotomy, some more surgery</td>
<td>No long-term issues</td>
</tr>
</tbody>
</table>

CTEV or Structural Talipes.....

.....is a complex foot deformity consisting of:

- Equinus
- Varus

- Cavus

- Adductus and medial rotation
In the UK, Structural Talipes affects 1–3 out of every 1000 live births, with a 2:1 male to female ratio. It is found bilaterally in 55% of cases.

Various theories are present as to its aetiology. There is also a strong genetic component. It is usually idiopathic, but has associations with other conditions (e.g. spina bifida, arthrogryposis)

**Assessment**

Assessment for positional foot problems and CTEV are identical, though a scoring system has been originally developed for the assessment of CTEV. The most common score is that developed by Pirani. The Pirani score is used both nationally and internationally. See [http://globalclubfoot.org/ponseti/pirani-scoring/](http://globalclubfoot.org/ponseti/pirani-scoring/).

Overall neonatal foot assessment includes general observation and checking the foot/ankle rest position (newborns do rest into inversion and slight plantar flexion).

Active Range of Motion (ROM) and Passive ROM are assessed, and if there is full Passive ROM then no treatment is indicated.

Full Passive ROM will not be possible in Structural Talipes, and this needs urgent referral to a Paediatric Physiotherapy or Paediatric Orthopaedic team. For Waltham Forest patients, the Whipps Cross Physiotherapy Team is contactable via bleep 206 or ext 5122. We have a shared pathway with the Royal London Hospital, and the Paediatric Orthopaedic Team there will need to be involved.

**What to tell parents**

There will be shared care via the pathway with the Royal London Hospital. Ongoing Pirani measurement will take place, and ideally Ponseti casting starts after day 5 and before 2 weeks. The cast is mobilised and manipulated, a total of 4–6 casts that are changed weekly.

80–90% undergo tenotomy and a final cast, and ‘boots and bar’ is used and is very important in preventing recurrence (used for 23 out of 24 hours for 3 months). It will also be used at night and nap times for approximately 4 years, with ongoing Achilles tendon stretches.

Some need surgery as they get older (transfer of tibialis anterior).

A good resource for parents is [http://www.steps-charity.org.uk/](http://www.steps-charity.org.uk/). We would encourage parents to utilise this.
Positional Foot Problems

UK statistics say incidence is 16–36 per 1000 births, and involves either forefoot varus/forefoot adductus or calcaneovalgus. Often minimal treatment is needed. Simple stretches, sensory stimulation, soft tissue massage, non-restrictive clothing and 'kick time' can be suggested, and parents can be reassured.

Calcaneovalgus Foot

References:


[http://www.zadeh.co.uk/paediatricorthopaedics/paediatricorthopaedics.htm](http://www.zadeh.co.uk/paediatricorthopaedics/paediatricorthopaedics.htm)

[http://www.globalclubfoot.org](http://www.globalclubfoot.org)