Flatfoot Reconstruction: A Pre Operative Planning Strategy

Dr. Kristy A. Golden, DPM, FACFAS
Kaiser Permanente
Mid Atlantic Permanente Medical Group
Disclosures

I have no financial relationships to disclose
Flatfoot Reconstruction: Rearfoot Procedures

- Medial calcaneal slide osteotomy
- Evans calcaneal osteotomy
- Double calcaneal osteotomy
- Double or triple arthrodesis

- When do to what??
Indications for a Medial Calcaneal Slide

- Stage 1 or 2 PTTD, +/- FDL transfer
- Lateral ankle impingement
- Heel does not invert on single heel rise, may only get to neutral
- Not rigid enough for a fusion, but not completely flexible
- Genu valgum
Indications for an Evans Calcaneal Osteotomy

- Flexible flatfoot
- Too many toes sign
- Calcaneal cuboid abduction > 15 degrees (normal considered 0-5)
- Unstable midtarsal joint with lateral forefoot loading
- Deformity mainly in the transverse plane
- Talar uncovering > 50%
Indications for a Double Calcaneal Osteotomy

- “Super flat” but not rigid
- Peritalar subluxation
- Too many toes sign combined with inability to invert heel with single heel raise
- Transverse plane flatfoot combined with genu valgum
Indications for a Rearfoot Arthrodesis

- Doing this less and less
- Rigid hindfoot that does not change position on heel raise
- Arthritis
- Neurologic pes planus
- **Severe deformity is not an indication**
Flatfoot Reconstruction: Medial Column Stabilizing Procedures

- Cotton osteotomy
- 1st tarometatarsal arthrodesis
- Navicular cuneiform arthrodesis
- Medial column fusion (NC-MC)
- Talonavicular arthrodesis

- When to do what?
Indications for a Cotton Osteotomy

- Flexible foot
- Young patient/open growth plates
- Minimal supinatus
- No medial column faults
Indications for a Navicular Cuneiform Arthrodesis

• NC FAULT*
• Pain at the NC with instability
  – Only fuse medial NC joint
  – use pre cut cotton graft
Indications for a Medial Column Fusion

• Arthritic medial column
• NC fault and a large IM angle in a transverse plane flatfoot
• NC fault and significant 1\textsuperscript{st} met elevatus with jamming
Indications for 1\textsuperscript{st} Tarsometatarsal Arthrodesis

- Transverse plane rearfoot deformity with an increased IM angle
- Symptomatic HAV in the setting of a flatfoot
- Fault or arthropathy at the 1\textsuperscript{st} TMT
- Long 1\textsuperscript{st} met with jamming of the MPJ
Talonavicular Arthrodesis

- Only as part of a double or triple arthrodesis
- Do not use as medial column stabilizer
- Do not use alone to stabilize the hindfoot
CASE #1

19 year old female lateral ankle pain & arch pain - stiff but not rigid foot
CASE #1

19 year old female
lateral ankle pain & arch pain
- stiff but not rigid rearfoot

July 27, 2017
APMA
CASE #2

22 year old female
torn PT tendon
- very flexible foot
CASE #2

22 year old female
torn PT tendon
- very flexible foot
CASE #3

20 year old male
arch pain
CASE #3

20 year old female
arch pain
CASE #4

46 year old male
PT tendon tear
- Hypermobile 1st MCJ
CASE #4

46 year old male
PT tendon tear
- hypermobile 1st MCJ