FHL transfer in treatment of neglected Achilles tendon rupture

R. Hart
Dept. of Orthopaedics and Traumatology
General Hospital Znojmo
Czech Republic
Disclosure

• My disclosure is in the Final AOFAS Mobile App
• I have no potential conflicts with this presentation.
Introduction

- Flexor hallucis longus muscle
  - is a strong flexor
  - has a long tendon
  - proceeds the same direction as triceps surae muscle
  - has a more distal belly → enhances vascularity and healing
  - grows together with FDL tendon in the master knot of Henry
Patients

- 2003 – 2005
- ♂ 19, ♀ 7
- Ø age: 44.2 years (29 – 62 y)
- Ø follow-up: 9 years (8 – 10 y)
- Ø surgery delay: 7 weeks (5 – 13 w)
Methods

- prone position, tourniquet, cephalosporin
- longitudinal incision medial to A. tendon
- scar tissue excision up to viable tendon
- FHL muscle is identified
- medial midfoot incision
- the master knot of Henry is identified
- FHL tendon is detached and delivered proximally into the main wound
Methods

- the tendon and part of the muscle belly cross over the gap
- the distal end of the tendon is split and sutured to both stumps using 3-0 Vicryl
- a below-knee plaster-of-paris cast is applied in neutral position for 6 weeks
- ankle mobilisation with physiotherapy guidance 6 weeks after surgery
- full weight bearing 10 weeks after surgery
Methods

• **Subjective assessment**
  - pain
  - activity limitations
  - footwear restrictions
  - satisfaction


• **Functional assessment**

  American Orthopaedic Foot and Ankle Society Score
  (pain, function, foot position; max. 100 points)
Results

• 70 min (55 – 90)
• Ø calf circumference - 0,75 cm
• Functional assessment
  - single-leg toe raise 26
  - ankle plantar flexion strength equal or a bit minor
  - squeeze test (Thompson -) 26
  - Ø ankle active ROM S 26 – 0 – 37
  - Ø MTP active ROM S 49 – 0 – 23
    active flexion:
    2 cases - 20° minor comparing non-affected side
    5 cases - 5° minor comparing non-affected side
Results

• **Subjective assessment** (Boyden)
  - excellent or good results
    26

• **Functional assessment** (AOFASS)
  - 94 points (65 – 100) preop → 89 points (51- 100) post-op

• **Complications**
  - no skin healing problems
  - no rerupture
Discussion

- medial approach → no risk of sural nerve lesion; protect the neurovascular bundle!
- FHL has a long tendon → allows bridging of larger defects
- FHL is a strong muscle and is in phase with the triceps surae during the gait cycle
Discussion

- used technique modification:
  - no calcaneal osteotomy or drilling for graft anchorage
  - no tendon passage through the proximal Achilles stump
- the loss of strength of plantar flexion of the hallux is in non-athletic individuals of minor importance
References


