Endoscopic Treatment for Chronic Achilles Tendon Rupture on High Demand Patients

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• Introduction
  – Chronic Achilles Tendon Rupture (CATR) is still a prevalent condition
    • It includes neglected ruptures and Re-ruptures
  – CATR is responsible for marked functional impairment
  – Surgical treatment is often required and an open procedure is still gold standard
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• Introduction
  – Endoscopic treatment has been described but lacks of support on current literature
    • Most authors recommend this technique in low demand patients
  – We present our results with Endoscopic Transfer of Flexor Hallucis Longus (ETFHL) on high demand patients
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• Why the **Flexor Hallucis Longus** (FHL)?
  – Strong plantar flexor
  – Contraction axis similar do AT
  – Neuromuscular ativation in phasis with **triceps surae**
  – Low muscular belly (biology)

  – Low Hallux functional impairment with LFH tenotomy
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• Material and Methods
  – Retrospective study
  – 14 patients submitted to ETFHL (May 2014 -> January 2018) (11 male – 3 female)
    • 12 Chronic AT rupture
    • 2 Acute re-rupture

  – Mean follow-up: **28 months** (12 to 48 months)
  – Pre and post-operative records:
    • AOFAS Score
    • ATRS
    • Heel rise height test
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• Surgical Technique

Figure 1. Posterior ankle arthroscopy

Figure 2. LFH exposure and debridment of the intended footprint

Figure 3. LFH Tenotomy. Hallux in maximum plantar flexion. ¹
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• Surgical Technique

Figure 4. Exterior LFH preparation

Figure 4 and 5. Guide wire orientation for insertion of the transferred tendon in the calcaneus
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• Surgical Technique

Figure 6. Interposition screw to fix the transferred LFH

Figure 7. Final result
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• Results - Scores

<table>
<thead>
<tr>
<th></th>
<th>AOFAS</th>
<th>ATRS</th>
<th>Heel Rise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-operative</td>
<td>61 (49 – 79)</td>
<td>11,6 (10 – 14)</td>
<td></td>
</tr>
<tr>
<td>Post-operative</td>
<td>98 (90 – 100)</td>
<td>95 (81 – 100)</td>
<td>7,8 cm</td>
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</tbody>
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– 10/10 – Return to play (previous level)
– 1 patient: transitory tibial nerve hypoesthesia
– No cutaneous / soft tissue complications
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• Results

9 months post-operatively – Full recovery of the triceps surae complex
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• Discussion
  – This technique was initially described in 2007 by T. H. Lui²
  
  – The experience with ETFHL is growing and some case series have been published ³,⁴,⁵ with promising results
  
  – Our series also show good results with remarkable functional rehabilitation
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• Discussion
  – Endoscopic techniques tend to show similar results to classic open techniques with less invasiveness and soft tissue complications
  
  – The authors consider that ETFHL may play in treatment of CATR in athletic, high demand population
  
  – Further studies are necessary to validate this considerations
References


