A Retrospective Review of a Minimally Invasive Technique of a Novel Locking Device for Achilles Tendon Repair

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Disclosures

• My disclosure is in the final AOFAS Program Book. I have no potential conflicts with this presentation.
Background

- Operative treatment of Achilles tendon ruptures has been shown in multiple series to have a lower re-rupture rate as compared to non-operative treatment. However, surgical intervention has a well-documented higher incidence of wound complications and iatrogenic nerve injury.

- Minimally invasive Achilles repair techniques offer the benefits of surgical intervention including faster rehabilitation and decreased re-rupture rates, with a decreased risk of wound related complications.

- This study evaluates the clinical outcomes of Achilles tendon ruptures treated surgically utilizing the PARS Achilles Jig (Arthrex, Naples, FL), a novel system that allows for placement of locking sutures in the Achilles tendon using a minimally invasive technique.


Helander et al. Acute Achilles Tendon Rupture: A Randomized, Controlled Study Comparing Surgical and Nonsurgical Treatments Using Validated Outcome Measures AJSM 2010

Materials & Methods

• Any patient with an acute tear of the Achilles tendon repaired using the PARS Achilles Jig (Arthrex, Naples, FL) system was eligible for inclusion in this study.
• All surgeries were performed by one of three fellowship trained foot and ankle surgeons at our institution.
Materials & Methods

- Standardized post operative protocol:
  - 0-4 weeks: Non weight bearing
  - 4-6 weeks: Progressive weight bearing and range of motion in boot
  - 6-8 weeks: Weight bearing in a comfortable shoe
- All patients returned post operatively at 6 and 12 months to:
  - Complete the AOFAS questionnaire
  - Provide subjective impression of their outcome
  - Perform ankle plantar flexion strength testing.
Results

• Average clinical follow up: 10.8 months (7.04 –15.8)
  – 6 month follow up: 12 patients
  – 12 month follow up: 16 patients

• Demographics:
  – Male: 26 patients
  – Female: 2 patients
  – Mean age: 41.3 years (27-52)
Results: Outcome Measures

- Average AOFAS score:
  - 94.6 (86 - 100)

- Patient satisfaction:
  - 26/28 satisfied
  - 2/28: satisfied with reservations

- Average time for return to previous level of activity:
  - 16.7 weeks (9 – 36)
Results: Clinical

- Re-ruptures: zero
- Sural nerve injuries: zero
- Wound dehiscence: zero
  - Superficial sterile suture abscess: One (required removal 5 months post operatively)
Conclusion

- Our results demonstrate that minimally invasive repair of the ruptured Achilles tendon utilizing the PARS Achilles Jig (Arthrex, Naples, FL) is both safe and effective.
- The wound complication rate and re-ruptures in this study were less than previously published reports and there was no incidence of sural nerve injury.