Outcomes and Complication Following Endoscopically-Assisted Percutaneous Achilles Tendon Repair

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Disclosure

The authors have no conflicts to disclose.

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My disclosure is in the Final AOFAS app.
We have no potential conflicts with this presentation.
Open repair of acute Achilles tendon rupture is considered as a standard surgical treatment while percutaneous technique has gained increasing popularity especially under endoscopic control. \(^1-^4\)

However, there is a lack of currently research reporting outcomes and complications following this technique.
Materials and methods

- A retrospective chart reviews with prospectively collecting data were performed in 32 patients with 32 legs who underwent endoscopically-assisted percutaneous Achilles tendon repair using 6-portal technique between 2008 and 2015.

The minimum follow up to be included in the study was 6 months (mean, 49.3 months; range, 6 to 76 months).
Materials and methods

The primary outcome included:
- Visual Analogue Scale (VAS)
- Foot and Ankle Ability Measure (FAAM; activity of daily living and sport activity)
- Short Form-36 (SF-36, PCS and MCS)

The secondary outcomes included:
- Operative time
- Time to return to daily activities, works, and sports.
- Complications.

Statistic Analysis:
- Pre- and post-operative FAAM, SF-36, and Visual Analog Scale were obtained and compared using pair t-test.
Surgical technique

- 6 portals technique.

Equipment

- Bird Beak
- Suture retriever
- No.2 Fiber wire
- 4.0mm 30 degree arthroscope
- 4.0mm shaver
Result

- There were 30 patients (24 male and 6 female) with mean age of 36.7 years. An average of tourniquet time was 39.6 minutes (range, 23-67 minutes)

- There was significant improvement of VAS (7.1/10 to 0.1/10)

- SF-36 (PCS (38.8 to 49.9) and MCS (49.0 to 51.8))

- FAAM (Activity, 19.0 to 88.4 and Sport, 0 to 65.6)
Result

An average time to return to activity of daily living, work, and sports were 6 weeks, 7 weeks, 3.6 months respectively.

The complications included hypertrophic scar without pain (6.7%), superficial wound infection (3%).

There was no re-rupture, deep vein thrombosis, sural nerve injury, and painful scar in this study.
Discussion

- Endoscopic technique for acute repair of Achilles tendon rupture show promising results with minimal complications.

- However, this technique requires learning curve in endoscopic technique and once the surgeon gained experiences, it will be feasible and effective for repair of acute Achilles tendon rupture.

- Limitations
  - Retrospective design with no randomization was used in the methods.
  - Small number of the patients.

- Strengths
  - Consecutive case collection.
  - Systematically collected outcome data using validated assessment methods.
  - All surgeries were performed by the same group of fellowship-trained orthopaedic foot and ankle surgeons.
Endoscopically assisted percutaneous Achilles tendon repair demonstrated significant improvement in terms of functional outcomes as measured with the FAAM, SF-36, and VAS. This technique is safe and feasible for treatment patients with acute rupture of Achilles tendon.
Reference:


Thank You for your attention!