RETROSPECTIVE ANALYSIS OF MINI-OPEN REPAIR VERSUS OPEN REPAIR FOR ACUTE ACHILLES TENDON RUPTURES

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My disclosure is in the Final AOFAS Program Book. I have no potential conflicts with this presentation.
INTRODUCTION & PURPOSE

- Open techniques are associated with
  - Wound healing morbidity\(^1-^3\)
  - Scar and adhesion formation\(^4,^5\)

- Mini-open techniques
  - Similar patient outcomes\(^7-^10\)
  - Reported to be of equivalent strength to open repair in cadaveric biomechanical studies\(^11-^13\)

- **Purpose:** Retrospectively compare the outcomes of the mini-open repair to the open repair of the Achilles tendon.
METHODS

- Retrospective review
  January 2002 – January 2010
  - Open Achilles Repair
  - Mini-open Achilles Tendon Repair

- Minimum 12 months follow up
  - Complete medical records
  - Post-operative VISA-A score
SURGICAL TECHNIQUES

OPEN REPAIR
- Longitudinal incision
- Atraumatic dissection
- Krakow suture technique with large gauge non absorbable suture
- Closure in layers
- Gravity equinus cast x2-4 weeks

MINI OPEN REPAIR
- Transverse incision over rupture
- Achillon jig to place proximal and distal sutures
- All sutures within the paratenon
- Layered closure
- Gravity equinus cast x2 weeks
RESULTS

- **Patients population**
  - Open repair: 16
  - Mini open repair: 18

- **Patient age**
  - Open repair: 41 + 2.5 years
  - Mini open repair: 46 + 2.5 years

- **Surgical timing**
  - Open repair: 15 + 2 days
  - Mini open repair: 15 + 2 days
RESULTS

- Initiation of functional rehabilitation
  - Open repair: Post op day 37 ± 5
  - Mini open repair: Post op day 19 ± 2
  - $p < 0.01$

- Unrestricted return to activity
  - Open repair: Post op month 7 ± 1
  - Mini open repair: Post op month 5 ± 0.6
  - $p < 0.01$

- VISA – A Score
  - Open repair: 82 ± 10
  - Mini open repair: 92 ± 5
  - $p < 0.05$

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**Unanticipated Patient Events**

- **Open repair (21%)**
  - 3 wound dehiscences

- **Mini open repair (11%)**
  - 1 wound dehiscence; 1 re-rupture

- Sural neuritis was not noted in either group.
CONCLUSION

- Mini-open technique provides a reliable means of tendon repair
- Maximizing outcomes
  - Early return to activities
  - Decreased scar formation
  - Fewer adhesions
- Minimizing complications

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