Supine Surgical Achilles Tendon Repair: Post Operative Infection, Wound Healing, Re-rupture, and Sural Nerve Injury
Disclosures

• none
Background

• Traditionally, Achilles Tendon repair is performed in the prone position
• Cons of Prone Position: difficulty managing airway, brachial plexus injury, post operative visual loss, corneal abrasion, longer operative time
Background

• No studies have looked at outcomes comparing prone vs supine Achilles tendon repair

• Two published technique guides without outcomes published in 2008 and 2009.

• Both described supine position with leg externally rotated and medial incisions.

Ref: 9, 10.
Methods

• Retrospective review
• 1 surgeon
• January, 2010 – December, 2015

Diagnosis:
• Patient history
• Palpable gap in the Achilles tendon
• Inability to actively plantarflex
• Increased dorsiflexion resting tension of the injured side
• Positive Thompson test
• MRI

Inclusion Criteria:
• Primary
• Supine
• Acute (repaired within 15 days)
• Midsubstance
• Closed

Exclusion Criteria:
• Subacute or chronic (>15 days to repair)
• Prone
• Concomitant injury
• History of injection to the area
• <18 years old
• Open
• Systemic soft tissue disease
• History of ipsilateral Achilles tendon surgery
Methods

- Chart review by CPT code resulted in 161 cases
- After exclusion criteria applied, 45 cases for review
Basic Surgical Technique

- Patient supine
- Bump under contralateral hip
- Leg externally rotated
- Thigh tourniquet
- A 5-8 cm incision was made approximately 1 cm medial to the center aspect of the Achilles tendon, centered proximally/distally over the palpable defect
Results

• Of the 45 cases, there were no major complications, including no infections, no wound complications, no re-ruptures, and no sural nerve injuries.
Results

• 39 men, 6 women
• Average age was 41 years old (range 20-66 years old)
• Average length of follow up was 157 days (range 25 - 1589 days)
• Average tourniquet time was 41 minutes (range 32-60 minutes).
• Average BMI was 29 (range of 23-36).
Results

• Time to OR:
  – 11 patients within 5 days of injury
  – 23 between 6-10 days from date of injury
  – 11 between 11-15 days from the date of injury
• Two smokers, one weekly marijuana user.
• No co-morbidities listed in 26 of the patients.
• The most common co-morbidities in the remaining patients were hypertension and hyperlipidemia.
Conclusion

• Early results suggest that open Achilles tendon repair in the supine position is a safe and effective procedure in terms of infection and wound healing, re-rupture, and sural nerve injury in a retrospective cohort study of 45 patients.
References


