Achilles Tendon Rupture
Comments and Pearls

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Disclosures

• Reviewer Arthroscopy, JBJS, Orthopedics, Sports Health, JSES, Physician and Sports Med.
• Editorial Board Orthopedics Today
• Editorial Board Orthopedics
• Editor Ortho Hyperguide Slack
• Board of Directors Eastern Ortho. Assoc.
Achilles Rupture: to fix or not to fix?

- **Very** Controversial, lot of literature
- Recent literature more supportive of non op rx
- Less surgery performed recently
BUT......

- Non op rx – higher re rupture rate
  - Less push off strength
  - Ideally instituted early
  - May not restore length tension relationship of muscle tendon unit
Non Op Rx

• Certainly reasonable for lower demand and older patients

• Early motion key
  Enhances collagen remodeling
  Promotes increased tensile stress of repair

Zhao HM 2011

- 8 RCT’s
- 777 patients
- Surgery – lower re rupture, earlier return to work
- No difference function
- Higher complication surgery
Operative versus nonoperative management of acute Achilles tendon ruptures: a quantitative systematic review of randomized controlled trials.

Wilkins R, 2012

- 7 Level 1 trials
- 677 patients
- Open repair less re rupture rate 3.6% vs 8.8%
- Strength measurements not standardized and could not be meta-analyzed.
Operative versus nonoperative treatment for acute Achilles tendon rupture: a meta-analysis based on current evidence.

Jiang N, 2012

- 10 RCT’s
- 894 pts.

- Operative rx – reduced re rupture
  increased complications

- No evidence increased function with surgery
Stable Surgical Repair With Accelerated Rehabilitation Versus Nonsurgical Treatment for Acute Achilles Tendon Ruptures
A Randomized Controlled Study
Nicklas Olsson, 2013

- Level 1, 100 patients
- Surgery not significantly superior to rehab - functional results, physical activity, or quality of life.
- BUT.... drop countermovement jump better with surgery
- 5 re ruptures non op
- NO re ruptures surgery
Active, Athletic: Fix!

- More *reliably* restore length tension relationship
- Debride tendinosis (normal tendon does not rupture)
- More confidently institute motion
Surgical Pearls

• Keep it simple
• Helping mother nature
• Avoid grafts, FHL, plantaris etc
• Supine
• Bias incision anterior to tendon
• NO FLAPS
John Lachman

- No flap, no necrosis
- 10 blade
- Peritenon and subcutaneous fat are one monolayer
- Respect anterior blood supply
Pearls

- Krackow Suture
- No 2 braided non absorbable suture
- Peritendon suture supplement

- KINDNESS TO TISSUE
- Avoid vigorous retraction
- **Simple** sutures for closure
Pearls

• Cast for 10-14 days (wound healing has primacy)
• Boot and motion to follow
• Delay strength Rx for 12 weeks
Conclusions

• Repair still best - active patients (JDK level 5)
• Functional results limited by ‘ceiling effect’ of evaluation instrument
• If non op ....early motion
• ‘Thou shall not raise flaps’
• Keep it simple
• Respect biology
Thank You