Treatment of Catastrophic Failures of Achilles Tendon Repairs Due to Deep Wound Complications

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My disclosures are in the Final AOFAS Mobile Application. I have no potential conflicts with this presentation.
Acute & Chronic Achilles Tendon Ruptures

• Surgery is often needed to restore Achilles tendon integrity & function.
  – Open primary repair for acute ruptures
  – Reconstruction for chronic ruptures based on the length of gapping between the ends of the Achilles
    » V-Y gastrocnemius lengthening for gaps of 2-5 cm
    » Achilles/gastrocnemius turndown for gaps > 5 cm

• The most common post-surgical problems are –
  – Wound complications
    » Superficial vs. deep dehiscence
    » Superficial vs. deep infection
Literature Regarding Postoperative Complications

- Much is written about the occurrence of –
  - Wound complications
    » Dehiscence and/or infection

- Very little is written about the occurrence & treatment of –
  - Catastrophic failures of the Achilles from deep wound complications
    » With deep wound dehiscence & infection
    » Where the tendon cannot be repaired or reconstructed
Purpose

• To examine outcomes from surgical treatment of catastrophic failures of Achilles tendon repairs/reconstructions from deep wound complications
  - With uniform single-stage treatment
  - Within a single surgeon’s practice
Methods

• 10 patients with deep wound dehiscence & infection after repair/reconstruction of their Achilles rupture
  – Retrospective from 2007 – 2016
    » 3 with acute & 7 with chronic ruptures
    » 6 at the mid-substance & 4 at the insertional Achilles

• Pre- & post-surgical clinical assessment
  – Foot & Ankle Ability Measures (FAAM)
  – Visual analog scale (VAS) for pain
Technique of single-stage surgical treatment

- Wound irrigation & debridement (I & D)
- Achilles excisional debridement
- Transfer of the flexor hallucis longus (FHL) into the posterior calcaneus
  - To replace the excised Achilles
  - From the same posterior ankle incision
- Wound closure
  - Primary vs. vacuum assisted (VAC)
Results

• All 10 patients that received this specific treatment for catastrophic failure of their Achilles repair or reconstruction –

  – Achieved full resolution of their deep wound complication
    » 7 received primary wound closure
    » 3 required skin grafting after VAC

  – Without recurrent wound dehiscence or infection
    » Needing no further surgery at their Achilles wound
Results cont.

- All 10 study patients were available for updated follow-up between 10 & 113 months
  - Mean FAAM increased from 36.3/100 -> 84.2/100 (P<0.05)
  - Mean VAS decreased from 6.6/10 -> 1.5/10 (P<0.05)
  - Full return to activities at home with normal gait
    » 3 patients have difficulties with prolonged high-demand activities involving their treated ankle at work
Discussion

• This means of surgical treatment for catastrophic failures of the Achilles after repair or reconstruction due to deep wound problems

  All patients had improved function & pain
  With the FHL replacing the excised portion of the Achilles

  All patients’ wounds healed
  3 study patients required skin grafting

  All patients had no recurrence of infection
  Without needing further I & D
Conclusion

• This method of single-stage surgery for catastrophic failures of Achilles tendon repairs & reconstructions from deep wound complications reliably achieves –
  – Improved function
  – Improved pain
  – Wound healing
  – Resolution of infection
References

