Prospective Study of Achilles Tendinopathy Treated with Isolated Gastrocnemius Recession: 2-year Follow-up of Patient Reported Outcomes

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Disclosure

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Introduction

Achilles tendinopathy (AT)

• Common disorder, unclear etiology, often treated non-operatively of which 24-49% of patients fail to respond\textsuperscript{1,2,3}.

• Gastrocnemius recession (GR)
  – Selectively reduces tension on Achilles tendon while minimizing strength loss associated with traditional surgical options\textsuperscript{4,5}.
    – Retrospective studies note encouraging results\textsuperscript{5,6}.

• Limited prospective long term data on use of GR in isolation for AT with regards to patient reported outcomes\textsuperscript{8,9,11}.
Purpose / Hypothesis

- **Purpose**: Report two year patient reported outcomes of isolated gastrocnemius recession on pain, self-reported function, calf circumference, heel raise testing

- **Hypothesis**: Isolated gastrocnemius recession would improve pain, self reported function, but may adversely affect calf circumference and heel raise testing
Subjects

Chronic Achilles Tendinopathy: n = 8

- Age: 51.5 ± 10.2 yrs
- Males : Females= 5 : 3
- BMI = 28.3 ± 3.2
- Unilateral AT and Silfverskiold
- Insertional: 5 Non-insertional: 3
- Failed minimum of 6 months non-operative care
- Average symptoms duration: 20 months, (range 10-30)
Methods

• ISOLATED gastrocnemius recession procedure (Strayer)
• Standardized postoperative and rehabilitation protocol
• Data Collection; PROSPECTIVE
  – Pre-operatively, 6 months, 2 years
  – Collected Visual Analog Scale (VAS), Foot and Ankle Ability Measure (FAAM), Calf Circumference, Heel raise testing, Subjective satisfaction

  • Calf circumference was an average of three measurements at halfway between the head of the fibula and lateral malleolus
Results

• Subjects
  – 8/8 subjects at 6mo
  – 7/8 subjects at 2yrs, mean of 23 +/- 5.5 months

• VAS
  – 50% reduction of pain at 6mo
  – 90% at 2yrs
  – 6/7 subjects reported no pain at 2yrs

• FAAM
  – ADL: 75% pre-op, 90% and 97% at 6mo and 2 yrs, respectively
  – Sports: 40% pre-op, 69% and 87% at 6mo and 2 yrs, respectively
    • Difficulty with jumping, lateral movement, ability to participate in desired sport/activity
Results

• Calf Circumference
  – Decreased by 1.4cm compared to uninvolved side

• Heel Raise testing
  – No difference between involved and uninvolved side

• Subjective Satisfaction
  – 5/7 subjects reported complete satisfaction with procedure
  – 2/7 subjects satisfied with minor reservations
  – No subjects required additional surgery
  – 2 required additional physical therapy
Discussion

• To our knowledge
  – First study to prospectively evaluate isolated GR for Achilles tendinopathy and present 6mo and 2yr follow-up data

• Pain relief markedly decreased and maintained at 2 years

• FAAM
  – ADL: restored to normative values
  – Sports: slightly below normative values, may reflect reported difficulties with jumping and lateral movements
Discussion

• Majority of patients should expect high satisfaction after the procedure
• Patients engaged in higher demand activities may have a prolonged recovery period and persistent limitations
Conclusions

• The outcomes from this study
  – Provide new information regarding patient outcomes from gastrocnemius recession
  – May be used to help advise patients on the expected post-operative course
  – May be used to help with appropriate selection of patients for this surgery
References


