PARTIAL PLANTAR FASCIA RELEASE USING BIPOLAR RADIOFREQUENCY ABLATION: MEDIUM-TERM RESULTS

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Disclosure

Partial Plantar Fascia Release Using Bipolar Radiofrequency Ablation: Medium-Term Results

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Our disclosures are in the Final AOFAS Program Book. There are no potential conflicts with this presentation.
Purpose

– Increased use for recalcitrant plantar fasciosis
  • Ease of use
  • Reduced OR time compared to open procedures
  • Quick recovery times
  • Good short term outcomes
    – 86% Excellent or Good outcomes in 12 month f/u

– The purpose of this study was to determine if promising short-term results were maintained over time
Surgical Technique

- Procedure is performed in the OR
- Grid is marked out over area of maximal tenderness in 5mm interval pattern.
- Ankle esmarch tourniquet is applied.
- A 0.62 k-wire is used to create micro-incisions at each pre-marked location.
- The incision is carried down through plantar fascia.
- The bipolar radiofrequency probe is placed through incision and activated in both superficial and deep plantar fascia.
Methods

- IRB approved
- Retrospective chart review with a minimum of 12 months follow up.
  - Average 36.1 months
- 111 patients after failing non-op management.
- Questionnaires: visual analog pain scale (VAS), foot function index (FFI), need for revision surgery and overall level of satisfaction.
Methods

• Standardized post op protocol
  – NWB 5-10 d, Boot WBAT x 3 week, Night splint during NWB activity, comfort shoe @ 4 week, return to activity as tolerated

• Patients were divided into success or failure group based on their satisfaction.

• The following results were compiled for each group.
  – VAS (0=no pain, 10=worst pain)
  – FFI (0=full function, 100=no function)
  – Satisfaction score (5=completely satisfied, 1=not satisfied)
  – Need for revision surgery
Results

Average follow-up time = 36.2 months
Results

- Success Group (n=49):
  - Average Age at Sx: 47.4
  - % Male: 25
  - % Female: 75
  - BMI: 33
  - Operative Side Left %: 59
  - Length non-op mgmt pre sx (months): 45.5
  - Time to final follow up (months): 30.6

- Failure Group (n=10):
  - Average Age at Sx: 75
  - % Male: 60
  - % Female: 60
  - BMI: 40
  - Operative Side Left %: 60
  - Length non-op mgmt pre sx (months): 29.3
  - Time to final follow up (months): 30.6
Conclusions

• Partial Plantar Fascia Release with bipolar radiofrequency ablation
• 83% success rate at almost 3 year average follow up.
• 1 revision surgery in failure group
• Quick recovery period
• Limitations
  – Retrospective study
  – Low response rate 59/111
    • Despite multiple phone calls and mailings
References

