Failed Tarsal Tunnel Release

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Success Rates/Timing of Procedure

- Success rates 44%-96%
- Continued compression $\Rightarrow$ intraneural fibrosis $\Rightarrow$ muscle atrophy and irreparable nerve damage
- Better outcomes with symptoms < 1 year
  - Sammarco/Chang 75 TTR
- Results favorable if symptoms < 1 year
  - Babba et al 34 TTR
- 61% relief of symptoms after TTR with “longstanding symptoms”
  - Turan et al 18 TTR
Technique Pearls/Pitfalls

- Bleeding → wound dehiscence and post-op scarring
  - Drop tourniquet
  - Consider drain
  - Evacuate seroma/hematoma in timely fashion
- Correct Etiology
- Minimal manipulation of nerve
Failed Tarsal Tunnel Release

No relief?
Relief with recurrence?
No Improvement – Double Crush Syndrome

- Systemic disease
- Radiculopathy/Plexopathy
- Proximal tibial nerve compression
Proximal Tibial Nerve Compression

- Soleal Sling Syndrome
- Severe POP calf 9cm distal to popliteal crease
- Conduction block between stimulation at knee and ankle
No Improvement - Incomplete Release

Order of Incisions for the Abductor Hallucis Muscle Fascial Release

1 = Superficial fascia
2 = Deep fascia
3 = Anchoring fascia
(Interneural septum)

Lamm et al
2007
No Improvement: Etiology not Addressed

- Space occupying lesions
- Hindfoot deformity
- Varicosities
- Neurilemoma
- Hypertrophic flexor retinaculum
- Post-traumatic fibrosis
- Low-lying muscle belly
Etiology: Schwannoma
Preoperative Imaging
Etiology: Ganglion
Preoperative Imaging/Workup
No Improvement: Incorrect Diagnosis
No Improvement: Intrinsic Nerve Pathology
Peripheral Nerve Stimulation
Temporary Relief with Recurrence: Adhesive Neuritis

- Relief 2-4 months then return of symptoms
- Post-op joint motion $\rightarrow$ scarring
- Nerve adhesions prevent gliding $\rightarrow$ traction neuritis/pain
- Risk factors
- Tender, hypertrophic scar, decreased joint mobility
Revision Decompression with Nerve Wrap
Conclusions

• Meticulous surgical technique
• Address etiology
• When it fails…
References


• Jolly GP. Tarsal tunnel syndrome: can a minimally invasive release be advantageous? Podiatry Today. 2009;3(22).


