Treatment with Tendon Reconstruction
G. James Sammarco, MD
n – nothing to disclose

Lateral Ankle Ligament Reconstruction Using Autogenous Tendon Graft
G. James Sammarco M.D.
Tulane University School of Medicine
New Orleans, LA

Classification of Reconstructions
- Type I – Anatomic
  - Ligament Repair/Reeﬁng (Brostrom. Karlsson)
  - Ligament Recon. (Colville, Burks, Sammarco)
- Type II – Non-Anatomic
  - (Evans, Watson-Jones, Chrisman-Snook)
- Type III – Dynamic (Larsen, Murkurjee)

Non Anatomic vs. Anatomic Tendon Reconstructions
Chrisman-Snook (original) Non Anatomic
Burke & Morgan Anatomic

Variations of Evans (using Per. Bevis)
Evans
Zwipp
Tenodesis Procedures

Dynamic Tendon Reconstruction
- Mukherjee - Transfer of EDB muscle
- No Static Restraint: Proprioceptive Reconstruction
- Larsen – Dynamic Re-Routing of Peroneus Brevis through Fibula

Anatomic Reconstructions

Indications for Reconstruction With Tendon
- High Demand Ankles
- Heavy Laborers
- High Risk Occupations
  - Roofers
  - High Steel Workers
- Failed Previous Surgery

Recurrent Instability
Reasons for Failure:
- Improper Procedure Selected:
  - Subtalar Joint Not Addressed
    - (Brostrom-Gould)
  - Technical Errors in Placement of Graft
  - Graft Not Secured
- Unrecognized Subtalar Instability.
- Traumatic Rerupture.

Recurrent Instability
Reasons for Failure:
- Pre-existing condition:
  - Congenital Ligamentous Laxity
  - Varus Hindfoot
- Other Pathology:
  - Loose body, OCD, Synovitis
  - Peroneal Tendon Tear or instability


ATFL & CFL Anatomy
CFL:
- 13mm from ST Joint to tip of fibula
- @ 133 degrees to axis of fibula

ATFL:
- 10mm from tip of fibula to 18mm from ST Joint
- @ 90 to fibular axis

Burks & Morgan AISM 1994

Sammarco and DiRaimondo
- Modification of Elmsele (1932):
  - Used Fascia Lata graft Doubled on itself to reconstruct ATFL and CFL through Bone Tunnels
- Winfield (1954):
  - Used Split Peroneus Brevis left attached distally.
Details

- 7cm. Incision Over Lat. Malleolus as for other anatomic procedures.
- Tendon Stripper used to harvest¼ PB for Graft (same as for ACLs).
- Bone Anchors used to secure Graft
- Frozen Tendon Allograft Graft may be used.
- 97% Stability
- Remaining ¼ PB Tendon Hypertrophies in one year (second look)

Technique for Reconstruction

Split Peroneus Brevis Tendon Graft 15 cm
Holes for suture anchors: ant. talus, and lat. malleolus, tip lat. malleolus, lat. calcaneus

Cadaver Tendon Graft May Be Substituted

Graft Anchored to Bone

Suture Anchors being inserted
Graft being sutured to anchors
Post Op Reconstruction Care

- Splint changed to cast at 4 days
- Cast changed to ROM Boot at 4 weeks Limited Wt. Bearing
- Rehab: at 6 wks with ankle support
- Return to sports 4 to 6 months

Reconstruction with Tendon Graft

- High Demand Ankle
- Indicated in Primary and Revision Cases
- Surgical Exposure same as Anatomic
- 97% Post Op Ankle Stability

Thank You

G. James Sammarco M.D.