Advances in Foot and Ankle Arthroscopy

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Financial Disclosure

Consultant: Wright Medical
Direct Ligament Repair

• Brostrom 1966, Gould modification 1980
• Avoids sacrificing tendons
• 87-95% good to excellent results, large review
• Less postoperative pain, instability, and loss of inversion/eversion strength
• ligament repair only 15-35% of patients continued to have pain and symptoms post op
  – Only 20% of intraarticular pathology seen with open lateral repair

Ferkel & Cham, FAI 2007
Technique – Primary ligament repair
Modified Brostrom Gould
Complications – Primary repair

- Poorer results if patients >250lbs
- CFL should be restored to prevent STJ laxity
- Must address underlying foot deformities
- Arthroscopy
  - 9% complications overall
    - 49% neurologic injury, distraction may increase risk
      - Peroneal nerve traction, skin necrosis from straps
    - Most resolve by 6mo postop
    - Infection: 1.4% ankle scopes
Disadvantages

Long term non weight bearing: 6 weeks
Extensive physical therapy recovery period
Larger surgical incision
Arthroscopic Repair Advantages

Smaller Surgical incisions
Faster Recovery?
Less Pain
Less Scar Tissue
Faster return to full activities?
**Fig. 1.** Preoperative anatomic landmarks (superficial peroneal nerve, superior border of the peroneal tendons, distal fibula).
Fig. 2. Debridement of the anterior lateral ankle joint with a 3.5-mm shaver.
Fig. 3. Debridement of the anterior face of the distal fibula with an ablator. The ablator works well to debride the fibula to raw bone to facilitate soft tissue adhesion to the bone.
Fig. 4. Identification of the medial and lateral borders of the distal fibula with a hemostat inserted through the anterolateral portal. We used this technique to determine the ideal location for the bone anchors.
**Fig. 5.** Insertion of the first anchor into the anterolateral portal through the drill guide and seated into position on the anterior distal face of the fibula.
Fig. 6. First pass: the first anchor with sutures exiting the anterolateral portal and the microsuture lasso directed toward the portal starting 1.5 to 2 cm anterior and inferior to the distal fibula.
Fig. 7. (A) Second pass placed approximately 1 cm anterior and superior and directed in the same manner, angled toward, and ultimately exiting, the anterolateral portal. (B) The nitinol wire is used to pull the second suture strand through the skin to location 2.
Fig. 8. (A) View of 2 anchors within the distal fibula. (B) Final construct with 4 strands exiting the skin in 1-cm increments and placed to capture as much of the retinaculum and capsule as possible.
**Fig. 9.** A small accessory portal created between the 2 sets of suture (between strand locations 2 and 3). This should be 1 cm in length, and only the skin should be incised.
**Fig. 10.** A probe is introduced into the incision and used to subcutaneously gather the sutures, pulling them into the accessory incision.
Fig. 11. Surgical knots are placed and tensioned for each suture set, correlating to their respective anchor within the fibula.
Fig. 12. Closure of portal and accessory incision.
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Post Operative
Advantages

Smaller Incision
Direct visualization for repair
Faster mobilization
Earlier Weightbearing
Post Operative Protocol

- NWB 2 weeks
- Sutures removed
- CAM Boot
- WBAT
- Physical Therapy
Demographics and Results

Age: 40 (24-61)

Pre Operative Pain score: 7.8 (7-9)

Post Operative Pain Score: 0.667(0-1)

Average Return to Activities: 52 Days (33-65)
AOFAS Score 1 year follow up

N=12

Pre Op AOFAS: 42
Post Op 1 year post op: 93
8 weeks post op
Questions?
Thank You
Management of Failed 1st Ray Surgery

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