TREATMENT OF NEGLECTED SYNDESMOTIC INJURIES

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CONFLICTS OF INTEREST

• None
• Syndesmotic ligament complex
  • Anterior inferior tibiofibular ligament (AITFL) – 35%
  • Posterior inferior tibiofibular ligament (PITFL) – 42%
  • Interosseous ligament (IL) – 22%
  • Inferior transverse tibiofibular ligament *

• Signs and Symptoms:
  • Persistent ankle pain
  • Difficulty with uneven surfaces
  • Sensation of ankle giving way
  • Stiffness
  • Limited dorsiflexion
DIAGNOSIS

• Radiographic Exam:
  • Tibiofibular clear space < 6 mm on AP and Mortise
  • Tibiofibular overlap
    • AP: >6 mm or >42% width of fibula
    • Mortise: >1 mm
  • Medial clear space ≤ superior clear space

• Advanced Imaging
  • MRI
  • CT

http://www.cmcedmasters.com/ortho-blog/the-adult-ankle
DIAGNOSIS

• Exam
  • External rotation stress test
  • Squeeze test
  • Cotton test
  • Fibula translation test
• Arthroscopic evaluation

SURGICAL TECHNIQUES


- Syndesmotic ligament repair
  - Acute (<6 weeks)
    - Syndesmotic screw fixation
    - Inadequate remnants of ligaments
      - Ligamentoplasty + screw placement
  - Subacute (6 weeks to 6 months)
    - Adequate remnants of ligaments
      - Suturing + screw placement
    - Slack but continuous ligament
    - Synostosis/fusion + screw placement
  - Chronic (>6 months)
SURGICAL TECHNIQUES

SYNDESMOTIC FUSION

- Injuries > 6 months
- Begin 1 cm proximal to ankle joint
- 2-3 cm fusion site
- Bone graft

CASE EXAMPLE

• 44 y/o male
• Severe ankle sprain 3 years prior
• Complains of stiffness, pain with running and cutting
• Pain at anterolateral ankle/syndesmosis
• Positive external rotation stress test
• Abnormal CT scan
CASE EXAMPLE
SUMMARY AND PEARLS

• 6 weeks to 6 months – consider repair/reconstruction
• >6 months – Syndesmotic fusion
• When performing syndesmotic fusion
  • Be aggressive in bone resection
  • Grafting- size matters
  • Avoid malreduction
THANK YOU