Syndesmosis Injury / Instability
- The Issue: rotational and translational stability
- Maintain normal mortise relationships
- 2 scenarios
  - Axial bony instability:
    - Maisonneuve fracture
    - Proximal and distal tib / fib disruption
  - Axial bony stability

Treatment Goal:
- Restore mortise stability
- Restore normal rotational function of fibula

Fixation methods
- Rigid: screw fixation
  - “Gold standard”
  - Eliminates normal motion
  - Iatrogenic malreduction
- The issue:
  - Screw breakage
  - Chronic pain from restricted motion with rigid fixation
- Flexible:
  - Absorbable screw
    - Acts initially like rigid screw
    - Viscoelastic fatigue and eventual resorption allow increased motion
  - Endobutton
• Restores syndesmosis position without rigidity
• Resists tensile separation elastically
• Allows limited rotational motion perpendicular to suture axis
• Knot vs knotless

References


2. Forsythe, K; Freedman, KB; Stover, MD; Patwardhan, AG: Comparison of a Novel FiberWire-Button Construct versus Metallic Screw Fixation in a Syndesmotic Injury Model; Foot Ankle Int, January 2008; vol. 29, 1: pp. 49-54.


4. Klitzman, R; Zhao, H; Zhang, LQ; Strohmeyer, G; Vora, A: Suture-Button Versus Screw Fixation of the Syndesmosis: A Biomechanical Analysis; Foot Ankle Int, January 2010; vol. 31, 1: pp. 69-75.


