Sagittal Band Injury
Normal Anatomy

Extensor apparatus zones

https://nl.pinterest.com/pin/56435801554786001/
Normal Anatomy

- Girdle at the level of the MCP joint that serves as the primary stabilizer of the extensor tendon

http://www.handandwristinstitute.com/sagittal-band-tear/
SB anatomy

- Retinacular system- sagittal bands
  - the sagittal bands are part of a closed cylindrical tube (or girdle) that surrounds the metacarpal head and MCP along with the palmar plate
  - origin
    - volar plate and intermetacarpal ligament at the metacarpal neck
  - insertion
    - extensor mechanism (curving around radial and ulnar side of MCP joint)
SB Function

• Function
  – primary stabilizer of the extensor tendon at the MCP joint
    • juncturae tendinum are the secondary stabilizers
  – resists ulnar deviation of the tendon (especially during MCP flexion)
  – prevents tendon bowstringing during MCP joint hyperextension
Sagittal Band Rupture

- Also known as traumatic extensor tendon dislocation and boxers knuckle
- **Mechanism of injury**
  - Most commonly occurs in flexed position with when a knuckle hits a sharp surface (i.e. tooth) resulting in an oblique laceration (central laceration may lead to isolated injury to the extensor tendon)
- **Location**
  - Most commonly occurs in the middle finger radial side
Sagittal Band Rupture

• Physical Exam
  – Snapping and subluxation of the extensor tendon when moving from extension to flexion
Sagittal Band Rupture

I – No extensor instability
II – Extensor subluxation
III – Extensor dislocation
Sagittal Band Rupture

- Ultrasound (dynamic)
Sagittal Band Rupture

- MRI (dynamic)
SB rupture

• Rupture
  – ulnar sagittal band
    • partial or complete sectioning does not lead to extensor tendon dislocation
  – radial sagittal band
    • distal sectioning does not produce extensor tendon instability
    • complete sectioning leads to extensor dislocation
    • sectioning of 50% of the proximal SB leads to extensor tendon subluxation
Treatment

• Non-operative
  – Acute, non open injuries
  – Extensor tendon splint – allows maximum 30 degrees flexion at MCP joint
Treatment

• Operative
  – Chronic, open injuries, athlete