Non-Operative Treatment of Meniscal Tears

Casey Wagner, MD
Non-Operative Sports Medicine
Emory Sports Medicine
Atlanta Wildcats Team Physician
Disclosures

• I have nothing to disclose
Meniscus Anatomy

- Medial
  - C-shaped
- Lateral
  - Circular
Meniscus Vascularity

- Red – Red
  - Peripheral 1/3
- Red – White
  - Middle 1/3
- White – White
  - Medial 1/3
Function
Function

- Shock absorption
- Stability
- Nutrition
- Lubrication
- Proprioception
Types of Tears

• Degenerative
• Traumatic

• Mechanical block?
Non-operative treatment

• Clinical J Sports Med. May 2020
  • Systemic review and meta-analysis
  • Degenerative meniscus tears
  • Mild to no underlying OA
  • Outcomes based on function and pain
  • Measures at 6 mo, 1 y, 2 y, 5 y
  • Arthroscopic partial meniscectomy not superior to non-op tx
    • Lower extremity strengthening exercises
Non-operative Treatment Options

G. Malanga et al. Treatment of Knee Meniscus Pathology: Rehabilitation, Surgery, and Orthobiologics. PMR. March 2019

• Physical therapy – first line in acute and chronic tears
• Physical therapy if underlying OA
• Orthobiologics
  • PRP and Mesenchymal cells
  • Research limit
  • IA or intrameniscal?
Non-operative Treatment

- Kaminski Int J Mol. Sci. Feb 2019
  - Prospective, Double Blinded, RCT
  - Percutaneous Trephination v Percutaneous Trephination + PRP
  - Chronic horizontal meniscus tears
Trephination???
Meniscal Trephination under US

PMR 2017
Non-operative Treatment

- Kaminski Int J Mol. Sci. Feb 2019
  - Failure rate determined by tear on MRI at about week 33
    - No significant difference between groups
    - PRP + trep 11 full heal and 4 partial out of 25 vs trep 7 f and 4 p out of 26
  - PRP meniscus significant rate of meniscus healing and survival
  - 8/11 treph. → arthroscopy
  - 2/15 PRP + treph → arthroscopy
    - PRP statistically significantly (P=0.032) better in cumulative outcome
  - No complications
Thank you
Citations


