Management of In-Season Meniscus Tears

Peter A. Indelicato MD
Emeritus Professor Department of Orthopaedics
Emeritus Head Team Physician
University of Florida

Introduction

• The purpose of this presentation is to describe the anatomical function of the meniscus, as well as the mechanism of injury, diagnosis, and treatment alternatives for meniscal tears that occur during the season.

Players with torn meniscus....

Meta World Peach
Returned:
12 Days
Partial Meniscectomy

Russell Westbrook
Returned:
4 Months
Meniscus Repair

WTF ????

Meniscus Anatomy

Meniscus Function

• Briefly stated, the meniscus is a “load sparing” structure that prolongs the longevity and quality of the articular cartilage of the joint surface.
History...Mechanism of Injury

- Meniscus tears occur as a result from a twisting injury on an **axial loaded** knee

Sideline Diagnosis

- History..."mechanical" character to the pain...intermittent, sharp, "locking"
- "Duck walking"
- Physical Exam .... Joint line tenderness (50%)
- McMurray, Apley ??

What tears feel like ?

- Medial meniscal tears more prone to have a mechanical nature to it ..“flap” or “bucket handle” configuration...
  - Clicking, locking, giving way episodes
    
    [Flap] ["Bucket Handle"]

“Ouch Factor !!!!”

- Medial meniscus tears usually associated with sharp, sudden pain resulting in patient yelling “ouch” ...
- More frequent “ouch”, happier surgical results !!!!!

What tears Feel like ?

- Lateral meniscal tears tend to be more radial or horizontal....swelling, pain
- Less “ouch effect”....

[Radial] [Horizontal]

Imaging Study....MRI

[Meniscal Tear]
What we know...King 1936

- A cut in the body of the meniscus will not heal...
- A cut in the periphery of the meniscus will heal...
- A cut from the body that extends into the periphery of the meniscus may heal...

What we think we know...

- Saving as much meniscal tissue as possible following a tear may prevent articular cartilage damage, but long term data is not available...

Therefore....

Advantages of Partial Meniscectomy

- Technically easy...
- Little chance to "scuffing" articular cartilage...
- Relatively quick rehab program...
- Usually can return to practice within 2 - 3 weeks following surgery...

Disadvantages of Partial Meniscectomy

- May lead to degenerative arthritis in the future

Warning !!!!

- Partial lateral meniscectomies have even a much more questionable recovery/prognosis compared to partial medial...
- meniscectomies
- WHY ????
Surgical Repair

Advantages of Surgical Repair

• Preserving meniscal tissue may prevent degenerative arthritis from developing in the future but long term data are still not available

Disadvantages of Surgical Repair

• Recovery is significantly longer compared to partial meniscectomy due to the fact the suture site has to be protected longer to allow for early soft tissue healing...
• Rehabilitation usually requires protected ROM and crutch walking for at least 6 to 8 weeks...
• Technically demanding ....

Risks of playing with tear?

• Extending the tear, possibly requiring more tissue to be removed?
• Worsening arthritis in future?
• PLEASE NOTE: there are no controlled studies available to substantiate this

What We Don’t Know

• Does a partial meniscectomy always “doom” the knee to develop degenerative (osteoarthritis) in the future
• Hulet et al (JBJS: 2001) reported on 74 knees following partial meniscectomy 12 years later:
  – Only 16% had x-ray evidence of DJD
  – 95% happy with their results

Given this information....

• What do you do when an athlete is diagnosed with a meniscal tear during the season ????
• Ignore vs. Surgery ????
• Repair (if possible) or perform partial meniscectomy ????
NFL Team Physician Survey

- 100% have let someone play with tear
- How quick to return to play following partial meniscectomy?
  - < 2 weeks ... 30%
  - 2 – 4 weeks ... 52%
  - > 4 weeks ... 18%
- How quick to return following repair?
  - 2 months ... 3%
  - 3 months ... 85%
  - 4 months ... 12%

Rusty Linton, MD

My approach

- If relatively asymptomatic...try and put off surgery until after season
- If symptomatic...recommend surgery...
- If un-repairable...perform partial meniscectomy
- If repairable...discuss options with player, ATC, parents { coach ??? }

Summary

- Mensical tears occur as a result from a twisting axial load on the knee
- Joint line tenderness is most common physical finding...absent 50%
- Diagnosis is made mostly from history and MRI
- Meniscal tears can be successfully repaired if confined to the vascular rim of tissue

Summary

- Partial menisectomies require less time to recover compared to meniscal repairs
- Theoretically removal of meniscal tissue may lead to increased chances of future problems, but there still is no clear correlation between partial meniscectomy and the inevitable onset of degenerative joint disease

Summary

- The timing of the surgery and type of procedure best indicated is a decision made best by the team surgeon but should include input by both the player and the certified athletic trainer ......
Thank you very much !!!!