

MENISCAL INJURY OF THE KNEE



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MENISCUS

- Once thought to be a vestigial muscle remnant with no known purpose, now known to be:
- –Important structure for knee force distribution–
Secondary stabiliser of the knee
- –Loss of entire mensicus (open meniscectomy) leads to progressive degenerative changes decades later
- •Fairbanks, JBS, (1948)



MENISCUS TEARS

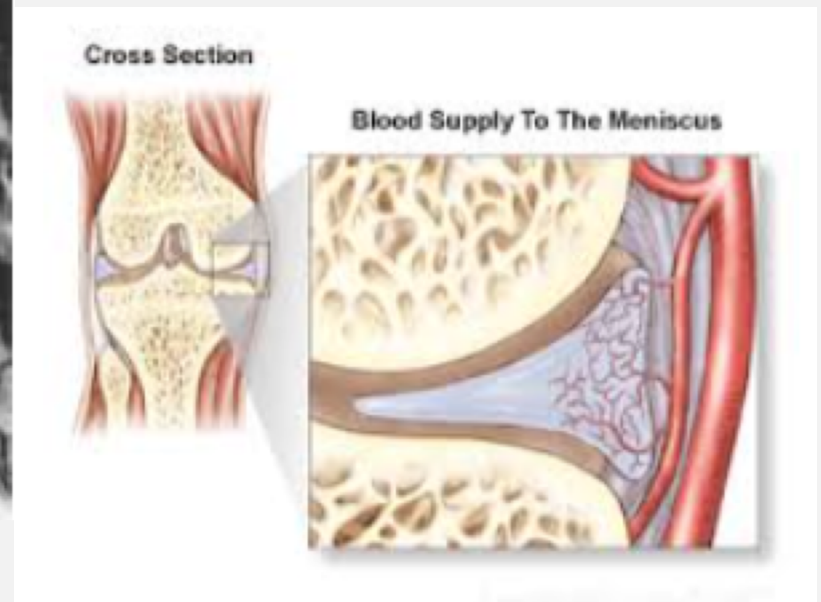
- Common
 - 35% of people over the age of 50 have a meniscus tear
 - 2/3 of these people are ASYMPTOMATIC
- In the presence of osteoarthritis, prevalence increases to 100% if Grade IV arthritic changes
- Can be traumatic or degenerative....



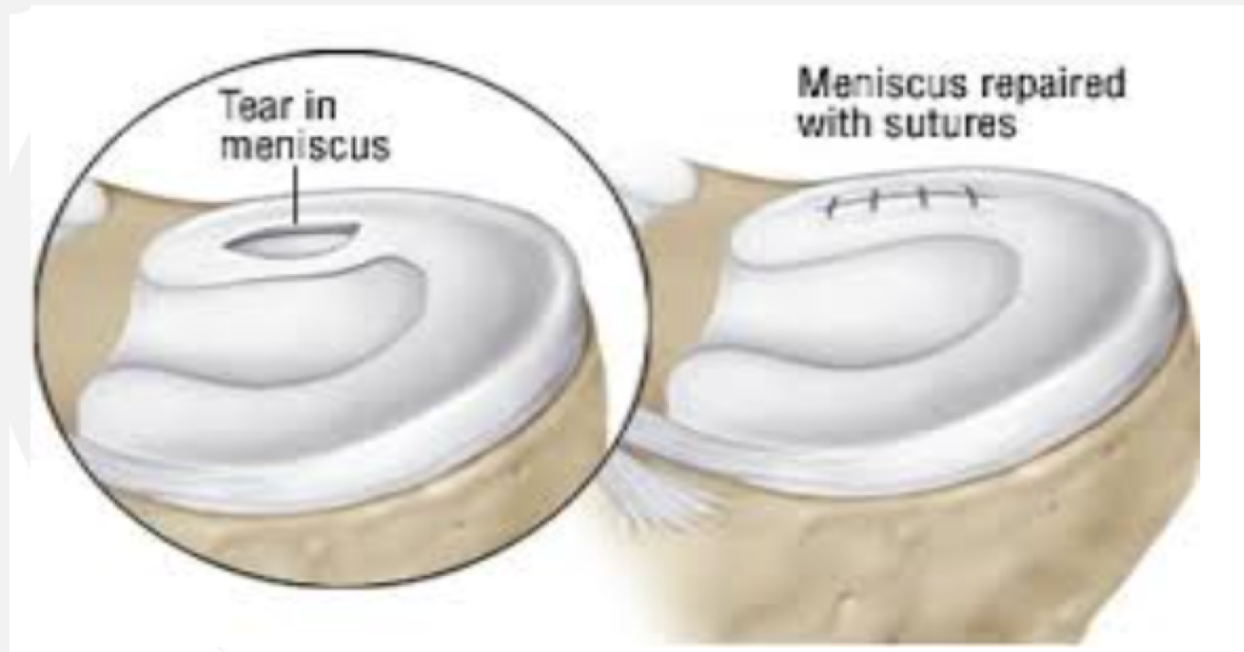


ANATOMY OF RECOVERY

- IT'S ALL ABOUT THE BLOOD SUPPLY



MENISCAL REPAIR



HISTORY WITH MENISCAL ISSUES

- Traumatic vs atraumatic/degenerative
 - Traumatic: Younger, acutely painful swollen knee
 - Degenerative: Middle age-older, chronic vs acute-on-chronic vs acutely painful knee
- Catching, clicking, locking of the knee may occur
- Exam may include painful range of motion, affected joint line tenderness, and positive provocative manoeuvres (McMurray's, Appley's)
- History, X-Rays, MRI



MENISCAL MANAGEMENT OF THE YOUNG

- • Non operative treatment NOT typically recommended although things are changing
- • Surgery to PRESERVE the meniscus (i.e., repair or debride, prevent tear progression)
- • Definition of young?
 - <25 years old?
 - <35 years old?
 - <50 years old?
- • Why?

MENSICECTOMY

- REMOVAL OF MENISCAL TISSUE DECREASES CONTACT STRESS AREA, INCREASING STRESS ON THE ARTICULAR CARTILAGE
- INCREASED STRESS IS IN PROPORTION TO THE AMOUNT OF MENISCUS REMOVED
- INCREASED STRESS INEVITABLY LEADS TO DEGENERATION OF THE JOINT



MENSICECTOMY

- Stein, *AJSM*, 2010
- Level 3 Cohort
- 4.5 and 9yr blinded radiographic f/u
- Young(ish) patients: avg age ~31
- Isolated, “traumatic tears”; both groups, vertical tears/bucket handle
- Results at years:
 - Meniscectomy: 60% OA changes (Grade I Fairbanks)
 - Meniscus repair: 20% OA changes (Grade I Fairbanks)
- No Grade 2 or 3 changes seen
- Repair much higher return to prior sport (96% vs 50%)



MANAGEMENT FAI

- ~82%
- If an isolated repair: ~50% healing rate
- **If in conjunction with ACLR: ~90% healing rate
- Tenuta, *AJSM*, 1994 (West Point, A/A eval)
- Cannon, *AJSM*, 1992 (arthrogram or A/A)
- Westerman, *AJSM*, 2014 (MOON GROUP)



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SURGERY??

- Sihvonen, *N Eng J Med*, 2013
- Multicenter RCT, Level 2 Evidence
- Arthroscopic partial meniscectomy vs. sham surgery in patients without OA
- Findings: NO DIFFERENCE b/t GROUPS @ 12mos
- Importantly, statistical difference in severity of non-radiographic appearance of arthritis seen in surgical vs. sham group.
- .



OUTCOMES THERAPY V SURGERY

- Herrlin, KSSTA, 2013
- RCT, Level I
- No or minimal OA (<grade I)
- Middle aged patients
- Findings:
- PT group did as well as Arthroscopy/PT group at 5years



TASK

- Review the outcome measures in relation to the FAI.
- Post links on the SHSS4063 news forum.