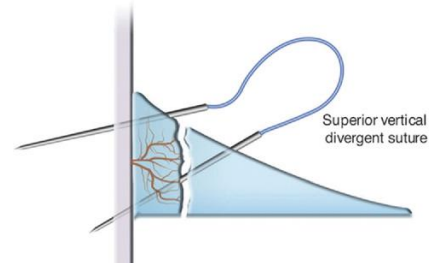


Expanding Meniscus Repair Indications – Horizontal Cleavage Tears and Root Tears

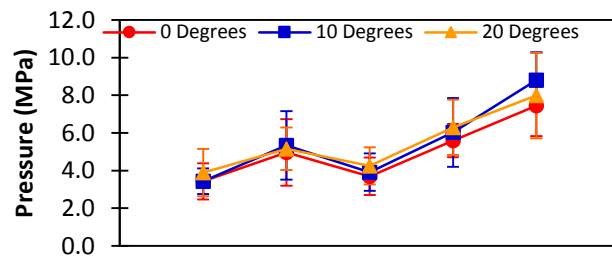
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Horizontal Cleavage Tears – Traditional Treatment

- Partial resection
- Often degenerative & extend to avascular zone
- Traditionally no good way to repair it – sutures horizontal and parallel to HCT



Single leaflet resection significantly increased tibiofemoral contact pressures
Repair (utilizing vertical loop suture) restores contact area and pressure to intact state



Repair of HCT can be successful:

Repair of Horizontal Meniscus Tears: A Systematic Review
(PR Kurzweil, NM Lynch, et al. *Arthroscopy* 2014)

- 9 articles met inclusion criteria.
- 98 patients with HCT repairs
- Success rate of 78%
- Comparable success rate to repairs of other types of meniscus tear

Arthroscopic Repair of HCT with Marrow-Stimulating Technique
(Ahn JH, et al. *Arthroscopy* 2014)

- 32 consecutive HCT repairs with marrow-stimulation
- 29/32 (90%) healed @ 4 year f/u
- Significant improvement in pain and functional scores
- Despite degenerative tears extending into avascular zone

Analysis of Short & Long-Term results of HCT repairs in Young Adults

(de Chou, et al. Ortho Traumatol Surg Res. 2015)

- Overuse injuries not amenable to classic arthroscopic sutures
- Open meniscus repair allowing lesion to be sutured vertically to vascularized zone
- 18 patients – f/u 2 years and 9 patients – f/u 10 years
- 26/27 (96%) successful – short term results maintained in the long term

STITCH Study (A Prospective, Non-randomized, Multi-Center Investigation of All-suture-based Repair of Horizontal Meniscal Tears

- 30 patients across 10 centers
- 2 year f/u with MRI at 1 year, x-rays @ 2 years)

ROOT Tears

- Patients often > 50 years old, overweight, non-athletic.
- Not typical “repair” indications

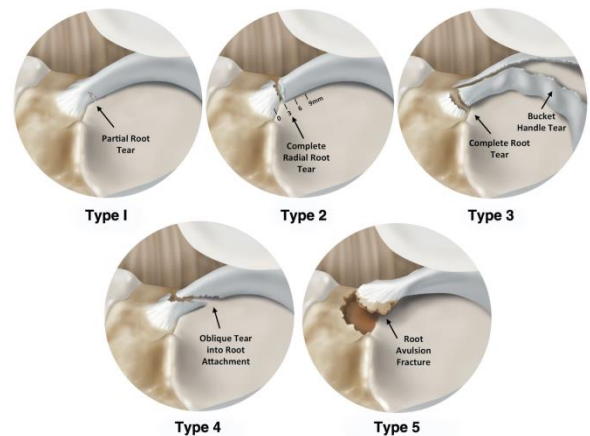
Typical MRI shows “ghosting” on lateral view, extrusion on coronal view

Classification (LaPrade *AJSM* 2015): ----->

Biomechanical Consequences of Radial Tear of MM at Posterior Root Attachment Site

(Padelcki, LaPrade *AJSM* 2014)

- Cadaver Study
- Tears (type 2) lead to loading of medial compartment – same as complete root avulsion
- Repair restored joint mechanics to intact state



Comparison of Clinical & Radiographic Results Between Partial Meniscectomy & Refixation of MM Posterior Root Tears: A Minimum 5-Year Follow-up

(Chung KY. *Arthroscopy* 2015)

- 35% of meniscectomy patients advanced to TKA
- 0% of repair patients advanced

Arthroscopic Transtibial Pullout for Repair of Posterior MM Root Tears: A Systematic Review of Clinical, Radiographic, and Second-Look Arthroscopic Results

(Feucht MJ, et al. *Arthroscopy* 2015)

- 7 studies with 172 root repairs
- Mean age 55 years - 83% female
- Complete or near complete healing in 96%
- Outcome scores significantly improved