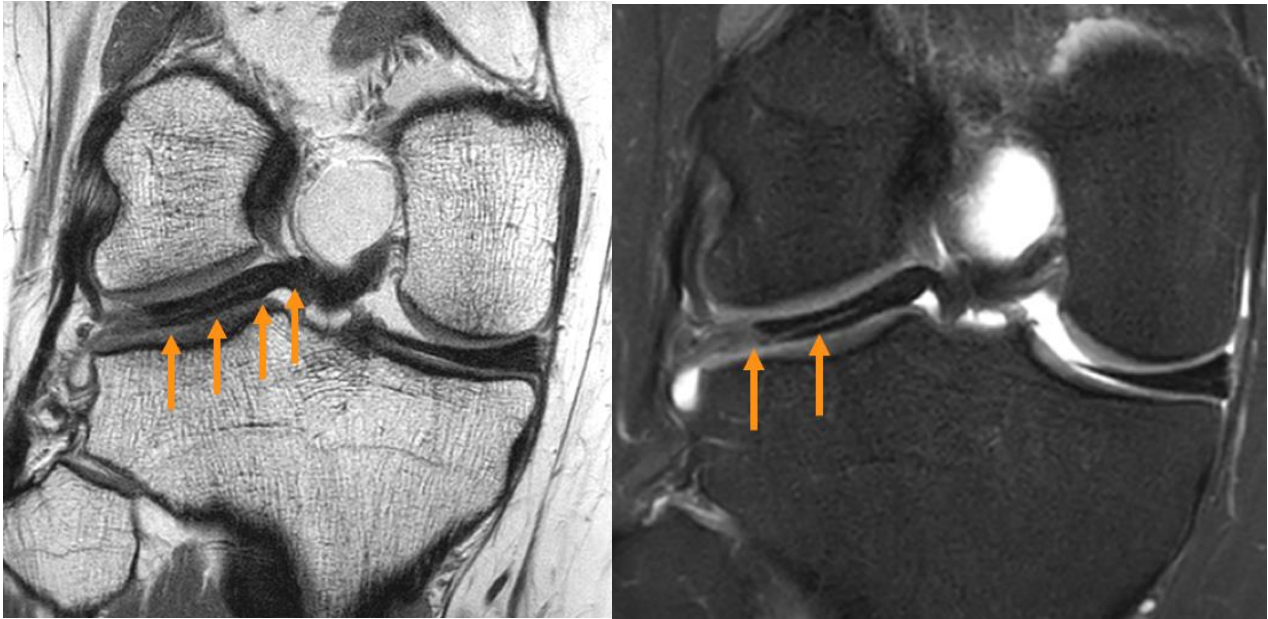


30 yr old male – previous right knee injury, ongoing lateral pain and instability, not improving with physiotherapy

MRI Right Knee (Standard protocol PD and PD fat-sat sequences):

- Complex undisplaced tearing, delamination and fraying at the periphery of the **discoid lateral meniscus**
- Small joint effusion



Left Image: PD Coronal – Discoid lateral meniscus (extending into the intercondylar notch) with complex peripheral tearing

Right Image: PD SPAIR Coronal – Horizontal and complex peripheral undisplaced tear components clearly demonstrated

Discussion

- Congenitally oversized meniscus due to failure of resorption of its central portion during development
- 5% population (M=F)
- Commonly presents in adolescence (pain, clicking or locking)
- 20% bilateral (consider imaging other knee)
- Complete or incomplete (partial) discoid meniscus
- Lateral >> Medial
- Prone to tearing (peripheral tear +/- transverse component is common configuration)
- Development of intrameniscal mucinous degeneration or meniscal cyst
- Conservative management in children with no tear
- Surgery
 - Resect discoid central portion if symptomatic adult
 - Repair/resection of tear

Classification

- *Complete*: No resorption of central substance; slab of meniscus extends to edge of intercondylar notch
- *Incomplete*: Partial resorption of central substance – large but normal triangular configuration
- *Wrisberg (unstable) variant*: No posterolateral meniscal attachment to tibia - only attachment of posterior horn is to menisofemoral ligament of Wrisberg



PD SPAIR Sagittal – Complex peripheral / posterior horn tearing

MR Imaging

- Coronal: Loss of normal tapering, wedge shape of central / free edge meniscus
 - Partial discoid meniscus will taper but medial-lateral width > 14 mm
- Sagittal: Continuous meniscal substance from anterior to posterior ("*too many bowties*" sign - slice thickness dependent)

X-Ray Imaging

- Lateral discoid meniscus may be associated with hypoplastic lateral femoral condyle and widened lateral joint space
- High fibular head
- Hypoplasia lateral tibial spine
- Abnormally shaped lateral malleolus of ankle

Differential Diagnoses

- Flipped meniscus
- Meniscal Bucket-handle tear

Further Reading:

Song JG et al: Radiographic evaluation of complete and incomplete discoid lateral meniscus. *Knee*. 22(3):163-8, 2015

Sun Y et al: Review of discoid meniscus. *Orthop Surg*. 3(4):219-23, 2011

Singh K, Helms CA, Jacobs MT et-al. MRI appearance of Wrisberg variant of discoid lateral meniscus. *AJR Am J Roentgenol*. 187 (2): 384-7, 2006

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