

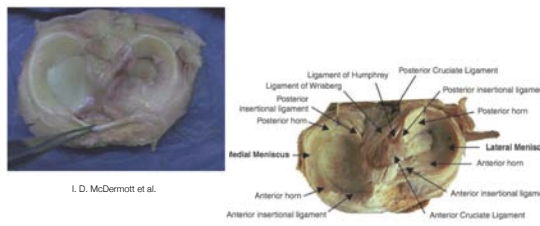
ASPETAR
 QATAR ORTHOPAEDIC AND SPORTS MEDICINE HOSPITAL
 مستشفى قطر لأمراض العظام والرياضة

Difficult Meniscectomy

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Anatomy

- They are wedge-shaped in cross-section and are attached to the joint capsule at their convex peripheral rim, and also to the tibia anteriorly and posteriorly by insertional ligaments. They partially cover the tibio-femoral joint surface.

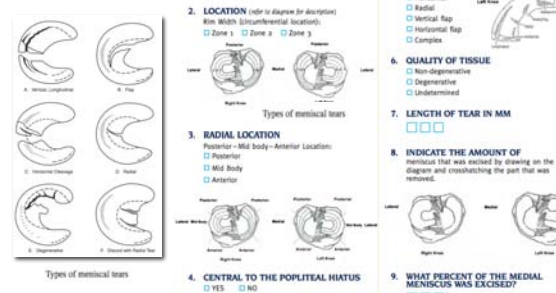


The diagram shows a cross-section of the knee joint. Labels include: Ligament of Humphrey, Posterior Cruciate Ligament, Ligament of Wrisberg, Posterior Insetional Ligament, Posterior horn, Lateral Meniscus, Anterior horn, Anterior Insetional Ligament, Anterior Cruciate Ligament, and Radial Meniscus. The caption below the diagram reads: I. D. McDermott et al.

Classification

THE ISAKOS CLASSIFICATION OF MENISCAL TEARS (Lund)

- TEAR DEPTH**
 - Partial
 - Complete
- LOCATION** (refer to diagram for description)
 Rim Width (circumferential location):
 Zone 1 Zone 2 Zone 3
- RADIAL LOCATION**
 Posterior - Mid body - Anterior Location:
 Posterior Mid body Anterior
- CENTRAL TO THE POPLITEAL HIATUS**
 YES NO
- TEAR PATTERN** (refer to diagram for description)
 - Longitudinal-vertical; extension is a bucket handle tear
 - Horizontal
 - Radial
 - Vertical flap
 - Horizontal flap
 - Complex
- QUALITY OF TISSUE**
 - Non-degenerative
 - Degenerative
 - Undetermined
- LENGTH OF TEAR IN MM**
- INDICATE THE AMOUNT OF MENISCUS THAT WAS EXCISED BY DRAWING ON THE DIAGRAM AND CROSSHATCHING THE PART THAT WAS REMOVED.**
- WHAT PERCENT OF THE MEDIAL MENISCUS WAS EXCISED?**
 %



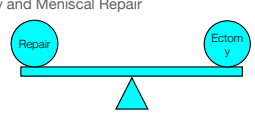
The diagrams show various types of meniscal tears: A. Anterior Longitudinal, B. Flap, C. Horizontal Oblique, D. Radial, E. Degenerative, F. Discoid with Bucket Tear. The caption below the diagrams reads: Types of meniscal tears.

Partial meniscectomy

- Meniscectomy remains a challenging procedure
- It can be more difficult than to repair
- If a meniscectomy is decided, an "adequate resection" must be done

Why it can be difficult?

- Difficult decision between Meniscectomy and Meniscal Repair
 - Strategy
- Technically difficult
 - 2 main situations
 - Lesion of anterior part of lateral meniscus
 - Lesions of posterior part of medial meniscus if the knee is tight
 - Meniscal Cyst? Discoid Meniscus? Complex lesion?



The diagram shows a balance scale with a fulcrum in the center. On the left pan, there is a circle labeled 'Repair'. On the right pan, there is a circle labeled 'Ectomy'.

Principles of Good Meniscectomy

- Remove all the torn meniscectomy but only the torn meniscus
- Good Set-Up
- Good Approach
- Good View
- Good Technique

Good Set-up

- General or regional anesthesia
- Supine position
- A tourniquet is usually applied. Bleeding control
- The leg is positioned in a thigh holder, which produced optimal rotational control of the limb. Then the end of the bed is lowered
- Or lateral post, clamped to the lateral aspect of the bed of the involved leg



Principles of Good Meniscectomy

- Remove all the torn meniscectomy but only the torn meniscus
- Good Set-Up
- Good Approach
- Good View
- Good Technique

Approaches

- Classic



Mazzocca et al.

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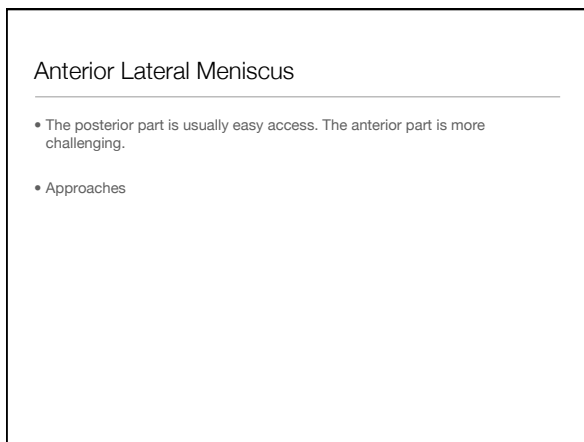
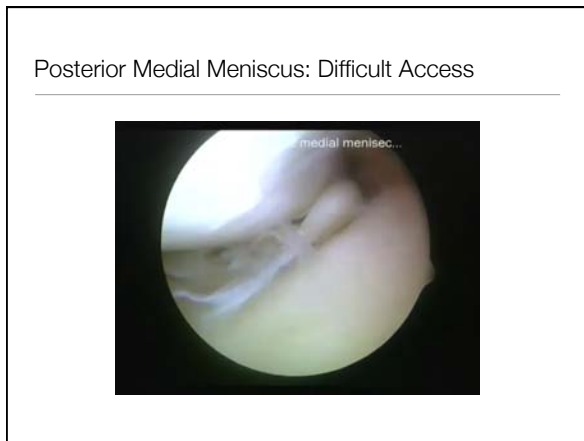
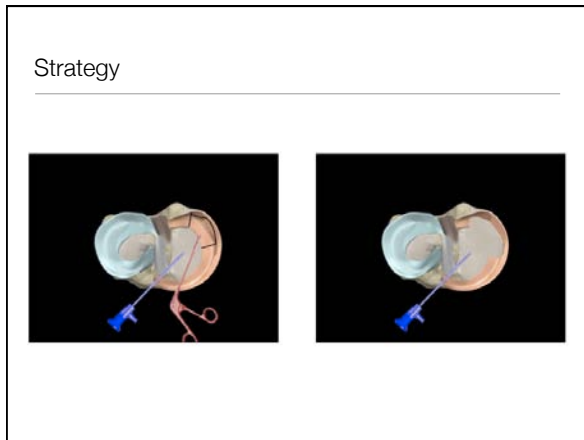
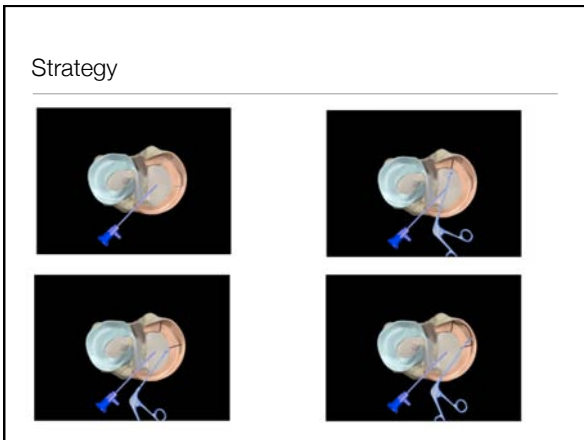
Principles of Good Meniscectomy

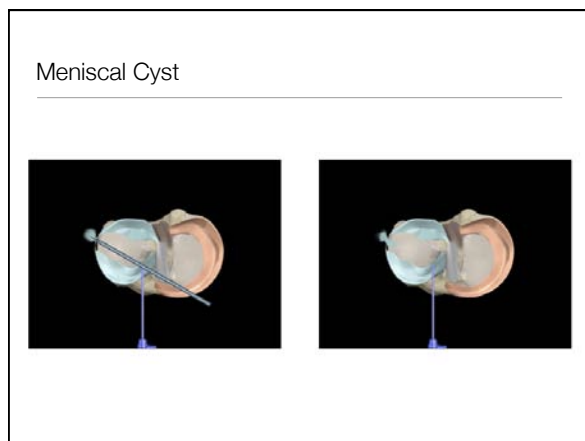
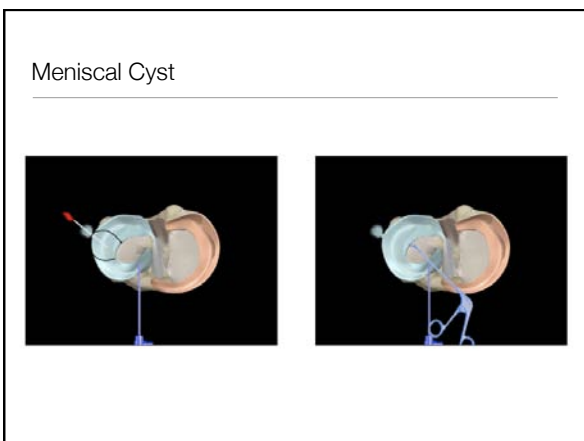
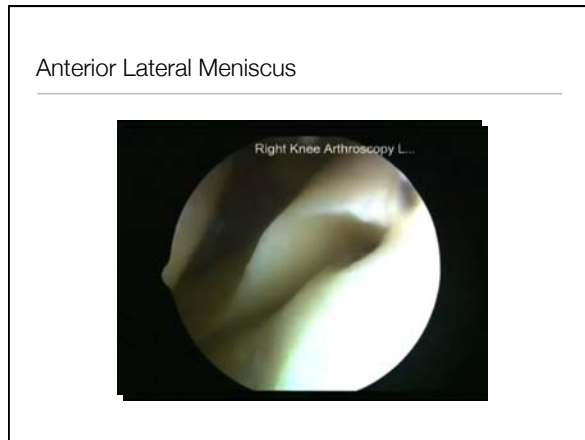
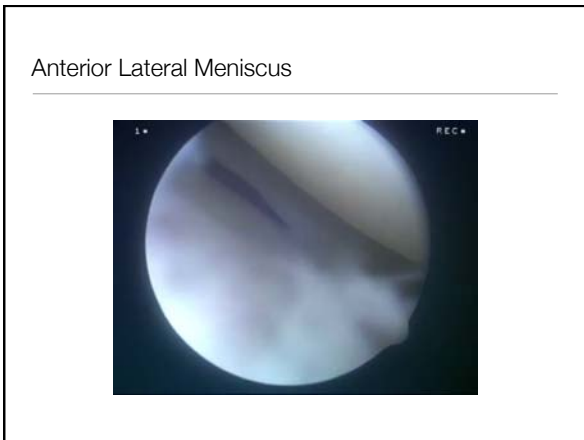
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Basic Principles

- Remove all mobile fragments.
 1. Do not leave sudden changes in rim contour.
 2. Do not try to obtain a perfectly smooth rim as some remodeling may occur.
 3. Use the probe often to reevaluate the tear.
 4. Protect the meniscus-capsular junction to avoid the loss of hoop stresses.
 5. Use both manual and motorized instruments to maximize efficiency.
 6. When uncertain if an area should be resected, err on the side of leaving more meniscus intact rather than compromising biomechanical properties.

Metcalf





Discoid Meniscus

- It is difficult to determine the true incidence of discoid menisci, but in a study by Nathan and Cole only 30 out of 1,219 menisci (2.5%) that had been surgically removed were found to have been discoid.
- Smillie found 185 discoid menisci in 3,000 meniscectomies (6%).
- Discoid menisci are more common on the lateral side than the medial side, and they are only rarely ever found in both compartments of the knee

Nathan PH, Cole SC (1969) Discoid meniscus. A clinical and pathologic study. Clin Orthop Relat Res 64:107-113

Smillie IS (1948) The congenital discoid meniscus. J Bone Joint Surg 30-B:671

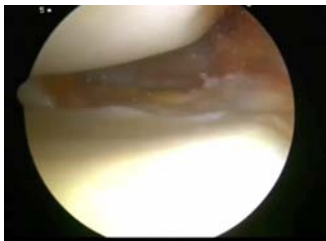
Discoid Meniscus

- Width of the meniscus remnant
- Stability of the meniscal rim after meniscectomy

Three diagrams illustrating discoid meniscus. Each diagram shows a cross-section of a knee joint with the meniscus highlighted in orange. The diagrams show the meniscus from different perspectives, highlighting its discoid shape and its location relative to the joint space.

Discoid Meniscus

- Width of the meniscus remnant
- Stability of the meniscal rim after meniscoplasty



Discoid Meniscus

- Width of the meniscus remnant
- Stability of the meniscal rim after meniscoplasty



Conclusion

- Don't under-estimate the Meniscectomy Procedure!