

Meniscus Injuries: Review Questions

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QUESTIONS

Choose the single best answer for each question.

- 1. A 20-year-old college football player twisted his right knee while attempting to make a tackle. He cannot completely extend his knee. There is minimal effusion and medial joint line tenderness. Laxity is not evident with either anteroposterior or varus/valgus stress. His magnetic resonance imaging (MRI) scan demonstrates a displaced bucket handle tear of the medial meniscus. What is the appropriate treatment for this patient?**
 - (A) Manipulation with reduction of the meniscus and return to play
 - (B) Open meniscectomy
 - (C) Arthroscopic meniscectomy
 - (D) Meniscal repair
- 2. A 40-year-old woman complains of lateral joint line pain. For the last several months, she has noticed a 1-cm nodule lateral at the joint line. The nodule is mobile and appears to be cystic. Extended nonoperative management has failed. What is the appropriate treatment for this patient?**
 - (A) Aspiration of the cyst and intra-articular steroid injection
 - (B) En bloc resection of the cyst
 - (C) Arthroscopic meniscectomy and arthroscopic cyst decompression
 - (D) Arthroscopic meniscectomy and en bloc resection of the cyst
- 3. A 16-year-old girl undergoing anterior cruciate ligament (ACL) reconstruction is noted to have a discoid lateral meniscus. The meniscus is not torn or hypermobile. What is the appropriate treatment for this patient's discoid meniscus?**
 - (A) No treatment
 - (B) Partial meniscectomy/saucerization
 - (C) Total meniscectomy
 - (D) Meniscal repair/stabilization
- 4. A 55-year-old man with early arthritis of the knee complains of medial joint pain and catching. He has tried 3 months of conservative measures such as nonsteroidal anti-inflammatory drugs, glucosamine, and physical therapy. An intra-articular steroid injection did not provide relief. His primary care physician ordered an MRI scan, which shows moderate chondrosis and a degenerative medial meniscal tear. What is the appropriate treatment for this patient?**
 - (A) Continued conservative management
 - (B) Intra-articular viscosupplementation
 - (C) Arthroscopic débridement and partial meniscectomy
 - (D) Total or unicompartmental knee arthroplasty
- 5. An 18-year-old female basketball player hurt her knee while landing after making a basket. She felt a pop and had immediate swelling. Physical examination and MRI confirm that she has a complete ACL tear and a vertical tear in the posterior horn of the medial meniscus. What is the appropriate treatment for this patient?**
 - (A) ACL reconstruction with delayed meniscal repair
 - (B) Meniscal repair with delayed ACL reconstruction
 - (C) Meniscal repair with fibrin clot and ACL reconstruction
 - (D) Meniscal repair and ACL reconstruction

(turn page for answers)

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EXPLANATION OF ANSWERS

- 1. (D) Meniscal repair.** Although meniscal repair will result in a premature end to this player's season, it is the best option. Meniscectomy (either open or arthroscopic) is associated with the late development of arthritis. Return to play, even if the meniscus can be reduced, will likely lead to further tearing and degeneration of the meniscus, making it irreparable at the end of the season. Meniscal repair is traditionally done with arthroscopically placed sutures that are tied directly over the joint capsule through small incisions. Newer devices are now available that allow surgeons to perform meniscal repair without incisions ("all inside" techniques); however, a variety of complications have been reported with their use.
- 2. (C) Arthroscopic meniscectomy and arthroscopic cyst decompression.** Several recent studies have reported successful treatment with partial lateral meniscectomy followed by cyst decompression. This procedure is done by placing arthroscopic instruments and/or shaver blades into the cyst from between the leaves of the horizontal meniscal tear. Meniscal cysts are highly associated with horizontal tears of the lateral meniscus. These tears communicate with the cyst and, much like a ganglia, allow joint fluid to accumulate and thicken in the cyst. Needle aspiration of the cyst from the outside in also can help with cyst decompression.
- 3. (A) No treatment.** An asymptomatic discoid meniscus should be left alone. Partial meniscectomy, or saucerization, should be reserved for discoid menisci with central tears. Total meniscectomy should be avoided because of the known association with the development of arthritis, especially in the lateral compartment. Meniscal repair is appropriate for discoid menisci that are overly mobile because of deficient coronary ligaments (the so-called *Wrisberg variant*). Discoid menisci can cover the entire surface (complete) or simply more of the surface of the lateral tibial plateau than normal (incomplete). In either case, surgeons should resist the temptation of removing asymptomatic menisci without tears.
- 4. (C) Arthroscopic débridement and partial meniscectomy.** Complex, or degenerative meniscal tears respond well to partial meniscectomy. Despite recent media attention regarding the role of arthroscopy in arthritic knees,¹ meniscal tears were not addressed in this study. The role of viscosupplementation remains unclear, but most physicians agree that this treatment is only a temporizing measure for more advanced arthrosis.¹ Knee replacement, either for one compartment or total replacement, is reserved for more severe arthritis. Ideally, replacement should be delayed until the seventh decade of life. Arthroscopic partial meniscectomy still has an important role in patients who have complex meniscal tears with mechanical symptoms.
- 5. (D) Meniscal repair and ACL reconstruction.** Numerous studies have shown increased rates of successful meniscal healing with combined ACL reconstruction and meniscal repair. This outcome is likely to be a result of intra-articular bleeding from ACL reconstruction and other factors associated with the ACL reconstruction as well as the fact that the knee is stabilized at the time of surgery. Meniscal repairs do poorly in an unstable knee. Delays in meniscal repair ultimately make the meniscus irreparable. Enhancement techniques, such as fibrin clot, should be considered for isolated tears that are more central but are rarely necessary when performing combined ACL reconstruction and meniscal repair.

REFERENCE

1. Moseley JB, O'Malley K, Petersen NJ, et al. A controlled trial of arthroscopic surgery for osteoarthritis of the knee. *N Engl J Med* 2002;347:81–8.

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