



POSNA

The Core Curriculum

Discoid meniscus

Objectives

1. Define discoid meniscus
2. Describe history and physical findings compatible with discoid meniscus in children
3. Describe a classification system for discoid meniscus
4. Describe treatment for discoid meniscus
5. Describe results of treatment for discoid meniscus

Discussion point

1. What lesion of the femoral condyle can accompany discoid meniscus, and how does it affect the outcome?

Discussion

Congenital discoid meniscus is a rather confusing entity. If a discoid meniscus is present at all, it is obviously present during childhood, yet it is often asymptomatic until adult life. When symptomatic during childhood, the symptoms are variable and inconsistent, including clunking, giving way, snapping, locking, or lack of mobility. If the child is hampered to the degree that the parents seek medical attention, there should be objective physical findings that indicate intra-articular pathology. Quadriceps atrophy, which appears after a few weeks of protecting the knee, lack of full extension, and joint line tenderness are helpful signs. Dickhaut noted a palpable snap near complete extension in all six children/adolescents they treated for discoid meniscus. Effusion is less common. Routine radiography may reveal a widened lateral joint space, MR imaging reveals the lateral meniscus height to be greater than the medial, with a high intrameniscal signal.

Many present day writers use the classification system of Watanabe in describing the discoid meniscus; an incomplete meniscus, a complete discoid meniscus, and the Wrisberg type. The difference between the complete and incomplete is subjective and not of much clinical significance. The Wrisberg type is characterized by the presence of the ligament of Wrisberg passing from the posterior horn of the lateral meniscus to the posterior portion of the medial femoral condyle, and a lack of posterior attachment of the discoid meniscus. Such a meniscus would be unstable and displaced medially, laterally, or anteriorly. There is general agreement that the Wrisberg type of lateral discoid meniscus should be completely removed, as partial meniscectomy in this setting would leave an unstable posterior rim. There is considerable variation in the reported incidence of the Wrisberg type of discoid meniscus. Dickhaut reported all 6 children had a Wrisberg type of meniscus, Aichroth noted the majority of children had a Wrisberg type, others such as Pellacci found a low incidence or none at all.

If a peripheral attachment of the meniscus is noted, saucerization may be performed, leaving a rim of about 6-8 mm. Longterm results of knees treated with open meniscectomy are good, but osteoarthritic changes were often noted in a recent longterm study. Osteochondritis dissecans of the lateral femoral condyle is seen in a minority of knees with discoid menisci, but is associated with a poorer prognosis when present. Discoid meniscus appears to be more common in children of Asiatic descent.

References

1. Aichroth PM, Patel DV, Marx CL. Congenital discoid lateral meniscus in children. A follow-up study and evolution of management. *Journal of Bone & Joint Surgery - British Volume* 1991;73(6):932-6.
2. Bellier G, Dupont JY, Larrain M, Caudron C, Carlioz H. Lateral discoid menisci in children. *Arthroscopy* 1989;5(1):52-6.
3. Connolly B, Babyn PS, Wright JG, Thorne PS. Discoid meniscus in children: magnetic resonance imaging characteristics. *Canadian Association of Radiologists Journal* 1996;47(5):347-54.
4. Dickhaut SD, DeLee JC. The discoid lateral-meniscus syndrome. *J Bone Joint Surg (Am)* 1982;64:1068-73.
5. Dimakopoulos P, Patel D. Partial excision of discoid meniscus. Arthroscopic operation of 10 patients. *Acta Orthopaedica Scandinavica* 1990;61(1):40-1.
6. Fritschy D, Gonseth D. Discoid lateral meniscus. *International Orthopaedics* 1991;15(2):145-7.
7. Hayashi LK, Yamaga H, Ida K, Miura T. Arthroscopic meniscectomy for discoid lateral meniscus in children. *Journal of Bone & Joint Surgery - American Volume* 1988;70(10):1495-500.
8. Maffulli N, Chan KM, Bundoc RC, Cheng JC. Knee arthroscopy in Chinese children and adolescents: an eight-year prospective study. *Arthroscopy* 1997;13(1):18-23.
9. Pellacci F, Montanari G, Prosperi P, Galli G, Celli V. Lateral discoid meniscus: treatment and results. *Arthroscopy* 1992;8(4):526-30.
10. Raber DA, Friederich NF, Hefti F. Discoid lateral meniscus in children. Long-term follow-up after total meniscectomy. *Journal of Bone & Joint Surgery - American Volume* 1998;80(11):1579-86.
11. Sugawara O, Miyatsu M, Yamashita I, Takemitsu Y, Onozawa T. Problems with repeated arthroscopic surgery in the discoid meniscus. *Arthroscopy* 1991;7(1):68-71.
12. Vandermeer RD, Cunningham FK. Arthroscopic treatment of the discoid lateral meniscus: results of long-term follow-up. *Arthroscopy* 1989;5(2):101-9.
13. Washington ER, 3rd, Root L, Liener UC. Discoid lateral meniscus in children. Long-term follow-up after excision. *Journal of Bone & Joint Surgery - American Volume* 1995;77(9):1357-61.
14. Watanabe W, Takeda S, Ikeuchi H. *Atlas of arthroscopy*. Berlin: Springer-Verlag; 1979.

15. Woods GW, Whelan JM. Discoid meniscus. *Clinics in Sports Medicine* 1990;9(3):695-706.