

### MUSCULOSKELETAL CASE 1: DIAGNOSIS

#### LATERAL DISCOID MENISCUS

The diagnosis was made on the basis of magnetic resonance imaging, as the meniscus can be seen protruding far more centrally into the joint than normal (Fig. 1, arrows). On the sagittal images, the diagnosis can also be reached by noting that a larger than normal number of slices demonstrate the body of the meniscus on moving from the lateral aspect of the joint centrally (Fig. 2, arrows). On MRI the untorn discoid meniscus has signal characteristics similar to those of normal meniscus. Discoid menisci are far more prone to tearing and therefore may demonstrate abnormal signal intensity extending to the meniscal surface. The meniscus will often also be thicker than its counterpart.<sup>1</sup> If the meniscus is torn, a displaced fragment can often be recognized.

Discoid menisci are seen far more frequently affecting the lateral meniscus than the medial meniscus, although

the precise rate is uncertain. The ratio of lateral to medial has ranged from 15:1 to 4:1.<sup>2</sup> Clinically, these menisci are important because they are prone to tearing, resulting in the typical symptoms, which include joint locking and knee pain. Occasionally, patients may present with an untorn meniscus, producing snapping on flexion and extension. The whole meniscus or only a portion of it may be discoid. The diagnosis is made far more easily on MRI than on computed tomography or arthrography and is the preferred imaging modality. Coronal images, in particular, facilitate the diagnosis.<sup>2</sup> Rarely, plain film findings may be those of hypoplasia of the lateral femoral condyle and a fibular head that is higher than normal.<sup>2</sup> Widening of the lateral joint space may be seen, and reputedly there is decreased height of the lateral intercondylar tibial spine. The etiology of discoid menisci is unclear, although a congenital origin was largely the ac-

cepted cause. Recently, it has been recognized that embryologic proof is lacking. It has been suggested that an acquired lesion is more likely and that these menisci may develop when abnormal attachments to the meniscal femoral ligament (ligaments of Humphrey and Wrisberg) are present.<sup>3</sup>

#### References

1. Silverman MJ, Mink JH, Deutsch AL. Discoid menisci of the knee: MR imaging appearance. *Radiology* 1989;173(2):351-4.
2. Munk PL, Helms CA, Janzen DL, Vellet AD. The menisci. In: Munk PL, Helms CA, editors. *MRI of the knee*. 2nd ed. Philadelphia: Lippincott-Raven; 1996. p. 83-111.
3. Stark JE, Siegel MJ, Weinberger E, Shaw DW. Discoid menisci in children: MR features. *J Comput Assist Tomogr* 1995;19(4):608-11.



FIG. 1.



FIG. 2