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Medial meniscal cyst of the knee—an unusual presentation: A case report

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ABSTRACT

We report an unusual case of a large, asymptomatic, medial meniscal cyst of the knee. Medial meniscal cysts are relatively uncommon, are usually symptomatic and in most cases are so small that only magnetic resonance imaging can confirm the diagnosis.

Key words: *cyst; medial meniscus*

INTRODUCTION

The occurrence of meniscal cysts of the knee is well documented in the literature, with the first description by Nicaise dating back to 1883.[1] Cysts originating from the lateral meniscus are reported to be 3 to 10 times more common than those originating from the medial meniscus,[2] but medial meniscal cysts are often relatively larger on presentation, as they have more room to expand.[3] Magnetic resonance imaging is the investigation of choice for diagnosis of meniscal cyst, as it also reveals the associated typical horizontal tear of the medial meniscus.[4] All reported cases of medial meniscal cysts have been in symptomatic patients.[1,5,6] We report a unique case of a large, medial meniscal cyst which remained asymptomatic.

CASE REPORT

A 59-year-old man was referred to the Department of Orthopaedics, Frenchay Hospital, Frenchay, in June 1999, with a progressively increasing swelling over the medial side of his right knee for 18 months. There was no history of trauma. Even though the swelling was large, the patient was in no pain, and there was no locking or giving way of the knee. On examination there was a non-tender, transluminant swelling of grapefruit-size, located over the antero-medial aspect of the knee, which was more prominent on extension of the knee. There was no joint effusion or ligamentous instability. Apleys and McMurray's tests were

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Figure 1 Magnetic resonance image of the right knee, showing the large medial meniscal cyst extending around the medial collateral ligament into the soft tissues.

Figure 2 Operative photograph of the medial meniscal cyst.

negative. The range of motion of the knee was 0°–120°. Magnetic resonance imaging showed an oblique tear of the posterior horn of the medial meniscus, and a large, lobulated meniscal cyst extending around the medial collateral ligament into the soft tissue. The lateral meniscus, anterior cruciate, posterior cruciate and collateral ligaments were normal in appearance (Fig. 1).

The well-circumscribed cyst was excised in entirety through a longitudinal incision (Fig. 2). During surgery the cyst was traced down to the base before excision, and the synovial lining was sutured to the base of the medial meniscal rim, thereby closing the meniscal defect. The excised specimen measured 7 x 6 x 1 cm, and contained clear gelatinous material. Histopathological examination showed fibrofatty and fibroconnective tissue, focally lined by synovial cells, with mild chronic inflammation, and synovial hyperplasia. The findings were consistent with a meniscal cyst, and there was no evidence of malignancy. The patient was mobilised with full weightbearing, and discharged from hospital the day after surgery. At 1-year follow-up, he had full range of knee movement and remained asymptomatic, with no sign of recurrence.

DISCUSSION

The aetiology of meniscal cyst remains controversial. Most authors believe that a combination of trauma, with degenerative changes in the meniscus, may lead to the development of a horizontal cleavage tear. The motion of the knee is then thought to drive synovial fluid into the tear, leading to herniation of the synovium.[7] Others have suggested that the origin may be developmental, with cystification of foci of myxoid degeneration within the meniscus.[5] The characteristic finding of medial meniscal cyst is the presence of a palpable swelling over the medial joint line. The swelling is prominent in extension.[6] A history of trauma, with pain or discomfort over the medial joint is common, with mechanical symptoms less frequently reported.[8] Radiographs occasionally demonstrate bony erosion under the cyst.[2,6] Large cysts with involvement of the medial collateral ligament require open excision. Smaller cysts may be treated arthroscopically.[8] In the case reported, the medial meniscal cyst was unusual, both in terms of its size and in the absence of symptoms at presentation.

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