

# Painful fabella

## A case report with review of the literature

Fabellectomy gave immediate and continued relief of symptoms to a patient with pain of long duration in the lateral aspect of both popliteal fossae. Attention should be given to pathologic changes of the fabella in cases with intermittent posterolateral knee pain and normal examination of the knee, except for tenderness on pressure over the fabella. The clinical importance of the fabella is discussed with special regard to chondromalacia.

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The first report of successful removal of a fabella was published by Lepoutre in 1929. Since then, reports on the clinical importance of the fabella have been sparse, with only one report based on a large series of patients (Weiner & Macnab 1982).

By reporting a case of painful fabella, I want to draw attention to an unusual cause of popliteal pain.

### Case report

A 19-year-old male presented with a 3–4 year history of intermittent pain and slight swelling in the posterolateral aspect of both knees. The pain was accentuated by full knee extension. The patient was an active soccer player. The symptoms started after a special intensive training program and became progressively more frequent and intense, so that he had to stop playing soccer. Afterwards, even minimal strain resulted in pain and disability. Except playing soccer, he had no history of trauma, recurrent effusion, or locking. Treatment with temporary restriction of activities, injection of steroid and anti-inflammatory medication gave no more than transient relief.

A tender, hard and mobile intumescence could be palpated in the lateral aspect of both popliteal fossae, but no visible swelling was present. Apart from this, the knees were normal.

The lateral aspect of the left fossa was explored. The fabella (10 × 8 × 5 mm) was excised from the lateral head of the gastrocnemius. Pain relief followed immediately. Two months later, fabellectomy was performed on the right side with instantaneous pain relief. The articular surface of the fabella and femoral condyle appeared to be normal on both sides.

During the last 2.5 years, the patient has been able to work and compete in sports without knee pain.

### Discussion

The fabella appears as an island of cartilage at about the age of 10, but does not ossify until the age of 12–15 (Friedman & Naidich 1978). A fabella is present in approximately 15 per cent of the population. When present the sesamoid bone is usually found bilaterally on the anterior gliding surface of the lateral head of the gastrocnemius muscle, articulating with the lateral femoral condyle when the knee is extended (Goldenberg 1956, Pritchett 1984). Rarely, a fabella can be seen in the medial gastrocnemius muscle (Freyer 1961) and in the popliteal muscle (Slanina 1956).

The lateral radiograph (Figure 1) suggested a malrotation or dislocation of the fabella. However, on examination of 25 radiographs where the fabella was present, a similar position was seen in several cases, in particular when the knee was semiflexed and the fabella was small or medium-sized.

Barenfeld & Weseley (1975) have performed fabellectomy in three knees with good results. As in my case, grossly no pathologic condition was noted in either fabella, but microscopic examination revealed mild degenerative changes in the cartilage of the fabella.

The term "chondromalacia fabellae" was coined by Goldenberg & Wild (1952). Later, the

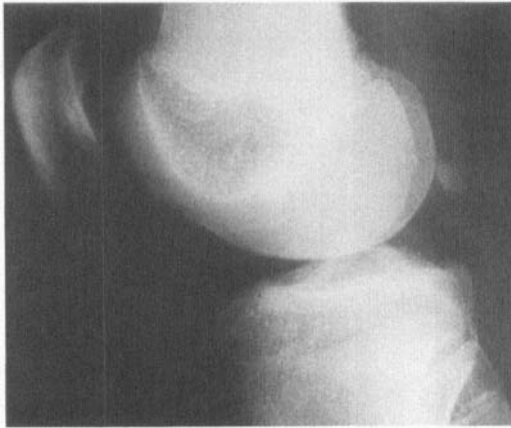


Figure 1. Fabella.

terms "painful fabella syndrome" (Barenfeld & Weseley 1975) and "the fabella syndrome" (Weiner et al. 1977, Weiner & Macnab 1982) have been used. Weiner & Macnab (1982) included patients with a cartilaginous nonossified fabella, and an elliptical section of thickened fibers of the gastrocnemius tendon riding over a prominent bony ridge on the condyle in 5 patients.

Goldenberg & Wild (1952) reported 2 cases of painful fabella where both the macroscopic and the microscopic pathologic findings revealed chondromalacic changes similar to those found in the patella. Electron microscopic studies (Zimny & Redler 1972) have later confirmed these findings.

In the literature, 30 knees with "chondromalacia fabellae", "painful fabella syndrome," and "the fabella syndrome" are described (Barenfeld & Weseley 1975, Goldenberg & Wild 1952, Goldenberg 1956, Weiner et al. 1977, Weiner & Macnab 1982, Zimny & Redler 1972). Nearly all the patients were young, athletically active, and they had no history of significant trauma. All had suffered intermittent pain located at the posterolateral aspect of the knee for quite a long period. In general, the pain peaked on full extension of the knee and could be reproduced by direct pressure over the fabella. In nearly all the cases, resort to various nonoperative methods have only produced transient relief or no relief of pain.

In 18 knees, fabellectomy was performed with complete relief of pain. Macroscopic chondromalacic changes were present in 10 cases, microscopic changes in 2 cases, and there was no information in the rest. The thickened tendinous fibers were excised with an excellent result in all the 5 youngster's knees. Of the remaining seven knees treated nonoperatively, the result was excellent in only 1 case and unknown in 2.

Weiner & Macnab (1982) recommend initially at least 6 months of nonoperative treatment before surgery in adolescents. Because of the disappointing results obtained by conservative treatment and the immediate and continued relief obtained by surgical intervention, fabellectomy could be recommended somewhat earlier in adults than in young patients.

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