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CASE REPORT

Superior dislocation of the patella
Case report and review of literature

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Superior dislocation of the patella is a rare diagnosis, which usually occurs after a trivial trauma. It usually requires manipulation with analgesics or may even need anaesthesia. We report a case of spontaneous reduction of the dislocation, which lead us to believe that this may be more common in the community than has been reported.

INTRODUCTION

Superior dislocation of the patella is a rare diagnosis and usually follows a trivial injury or may even be atraumatic. It may be confused with patellar tendon rupture (*4, 12*) or with a locked knee (*6*) and it is important to recognise it early to avoid pain and incorrect management of the patient.

CASE REPORT

A 54-year-old woman was admitted to our ward with inability to flex her left knee associated with severe pain. She was trying to reach over a chair with her knee straight on the edge of the chair. Suddenly she developed severe pain on the inside of her knee and also felt that she was unable to bend her knee.

On examination the patella appeared superiorly displaced and there appeared to be a hollow in the infra-patellar region. There was a palpable gap with tenderness over the inferior pole of the patella.

Plain radiographs revealed that the patella had dislocated superiorly and that the quadriceps mechanism had become lax. The patella appeared tilted forward but the patellar tendon appeared to be intact on plain radiographs (fig 1). Ultrasound of the patellar tendon showed it to be intact.

The clinical signs were inconclusive and were initially referred to as ruptured patellar tendon. However the correct diagnosis was made from the fact that the patient was not able to bend her knee and the tendon also was seen intact on radiographs. The dislocated patella spontaneously reduced with analgesics and the patient was left with a residual tenderness on the inferior pole of the patella.

DISCUSSION

Lateral dislocation is the commonest form of dislocation of the patella (*3*) and it is easy to recognise with a laterally lying patella. The other types

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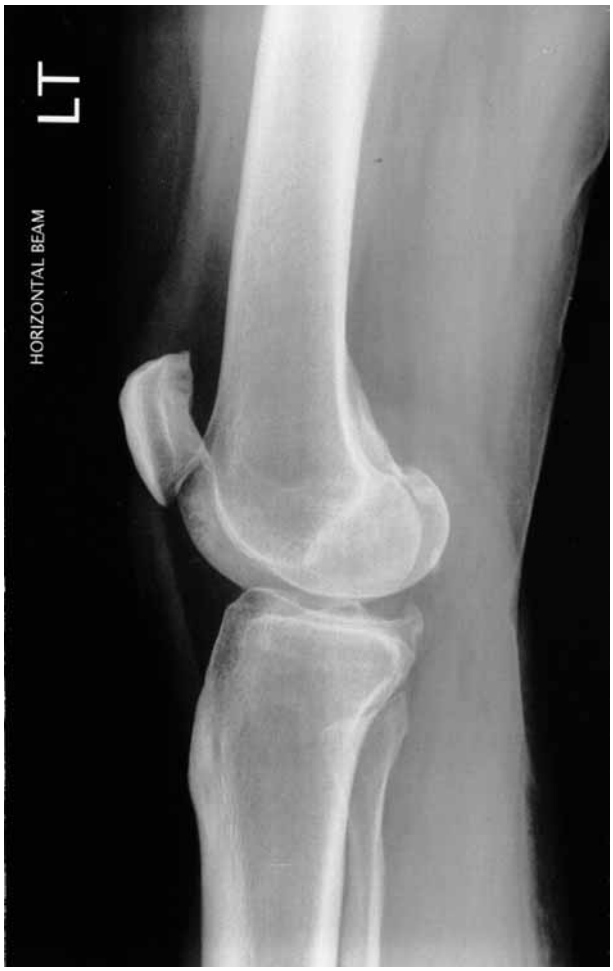

Fig. 1. — Lateral radiograph of the knee showing superior dislocation of the patella, with intact patellar tendon and anterior tilting of the patella.

of patellar dislocations which are rarer but still important to recognise are intra-articular (*8*), inferior (*5*), medial (*7*) and superior (*1, 2, 4, 6, 9-14*).

Superior dislocations of the patella are rare and excluding this case there have been 15 previous cases reported in literature (*2*). Three of these have been described in the last four years (*2, 6, 11*). The average age of the patients is in the older age group and this type of injury may be of increasing prevalence (*4, 11*) due to the determining role of degenerative disease and the increasingly older population in our society.

The main mechanism is that of a low-velocity injury (*1*) or a posteriorly directed force on to the inferior pole of the patella. Atraumatic cases (*6, 9, 13, 14*) caused by the active contraction of the quadriceps with hyperextension of the knee have also been described. This is a description similar to the type of injury sustained by our patient.

The pathology of the injury involves the locking of osteophytes at the inferior pole of the patella behind osteophytes on the superior part of the femoral sulcus or femoral condyles (*11*). Patella alta (*6*) may have a role to play in the pathogenesis in addition to degenerative changes.

The diagnosis is usually a clinical one and this lesion is to be differentiated from a patellar tendon rupture. In superior dislocation of the patella there will be an intact patellar tendon felt (*11*) and on lateral radiographs the intact patellar tendon may be seen with the patella locked on osteophytes. Clinically there is also the characteristic anterior tilt of the patella with a dimple below the patella (*2*). It is important to make an early diagnosis so that reduction can be attempted under analgesia and avoid unnecessary suffering and admission.

In all previous cases closed reduction was achieved by manipulation either under anaesthesia or sedation, except in one patient who required open reduction (*9*). In 9 cases details of reduction have been described (*2*) *:* reduction was obtained with either a direct pressure on the inferior pole of the patella or with a medio-lateral pressure or a combination of both.

In our patient the superior dislocation reduced spontaneously with analgesics.

SUMMARY

Superior dislocation of the patella is a rare diagnosis but may be more frequent due to the increasingly active older population with patellofemoral arthritis. These lesions may also be underreported as they may spontaneously reduce, as in our patient, and so should be kept in mind as one of the causes of locking of the knee in extension.

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