



QUESTION | WHAT SHOULD I DO WITH A PATIENT WHO HAS SUFFERED A PATELLO-FEMORAL DISLOCATION WITH MODERATE RETINACULAR TEARING? WHEN DO THEY NEED REFERRAL, SPLINTING OR MOBILISING?

ANSWER | Patella dislocation usually results from a twisting injury or a direct blow to the knee with the joint in slight flexion. The injury is painful and may cause the patient to fall to the ground.

The patella can reduce itself as the person tries to straighten their knee but more commonly is observed as a prominent bulge on the lateral margin of the knee. The medial condyle is uncovered and may be mistaken for the displaced patella (Medial dislocation is extremely uncommon and is usually a complication of surgery for recurrent lateral dislocation). When the patella dislocates the knee is swollen and neither active nor passive movement is possible. The knee is usually in a flexed position when the patient presents for acute treatment.

Patella dislocation can be caused by (1) Abnormal forces on a normal patellofemoral joint OR by (2) Normal forces on an abnormal joint. Recurrence of the dislocation without surgery is common with more than half of the patients having significant activity restrictions. Having a dislocation doubles the risk of patellofemoral arthritis over 15 years. Teenagers are 5 times more likely to dislocate their patella than adults and females are more likely to dislocate than males.

Factors that may predispose to dislocation include:

Generalised ligamentous laxity; A small lateral femoral condyle (relative to opposing tibial condyle); A small intercondylar groove; A small and / or high riding patella; A significant genu valgum deformity; and Quadriceps weakness; but it is possible to dislocate a 'normal' patella as well.

It is usually worthwhile trying a gentle reduction maneuver for an acute dislocation since the diagnosis is usually obvious. Simply straightening out the knee and (if necessary) applying a gentle medial force to the patella will reduce the joint and provide immediate pain relief for the patient. It is essential that all patients have an Xray including a skyline patella or Merchant view.

If the x-ray is performed with the patella still dislocated it will confirm the lateral displacement and in about 5% of cases, reveals an associated osteochondral fracture. When the history is suggestive of a dislocation which has reduced itself an x-ray must still be performed. CT scanning is useful when planning surgery but is rarely used in the initial stages of diagnosis and treatment. MRI is very useful for looking at soft tissue and chondral injuries. I order an MRI of the knee the first time a patient dislocates their knee but with a recurrent dislocator I only arrange the MRI if I suspect that they have had an osteochondral injury based on the history or xrays.

Once reduced the patient will usually have a haemarthrosis and be very tender at the medial edge of the patella where the soft tissue structures have torn. They will be reluctant to flex the knee and have a positive patella apprehension test.

If the dislocation has taken place in an otherwise normal knee and the patient is a regular sports participant it is becoming more common to repair the structures that have been torn to allow a more reliable return to sport. If the patient leads a sedentary lifestyle I recommend immobilizing the knee in a firm supporting bandage and Zimmer splint for 3 weeks with the leg extended with full weight bearing allowed. Once the splint is removed, physiotherapy should be started immediately to strengthen the quadriceps muscles to try to prevent further dislocations. There is some evidence that high level sports people will do better with an immediate MPFL reconstruction as up to 50% of them do not return to their previous level of sport after a dislocation episode. If the dislocation takes place in an abnormal knee (recurrent dislocator) it is important to work out where the pathology is that is causing the dislocation. Non-operative treatments are always attempted first but surgery is often required. On the whole, surgery works well to prevent further dislocations because skeletal and muscular components of the patellofemoral joint and extensor mechanism are realigned. Surgical treatment options include:

Release of lateral structures

Repair or reconstruction of medial structures

Transfer of the tibial tubercle medially/anteriorly/distally to realign the pull of the quadriceps

If there is an osteochondral fracture surgery is almost always required. Small osteochondral fragments are usually removed arthroscopically but large ones are fixed back into position where possible.

Summary

Patella dislocation is common. Reduction of an acute dislocation can usually be achieved simply by straightening the knee. Check to see if there are predisposing factors to make recurrent dislocation more likely and arrange an x-ray. Recurrent dislocators are only operated on when their day to day life is being interfered with. Most first time dislocators are treated in an extension splint followed by physiotherapy but surgery to repair or reconstruct the medial patellofemoral ligament is becoming more common in high level athletes.

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