RECURRENT DISLOCATION OF THE PATELLA

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RECURRENT dislocation of the patella describes a condition in which the patella dislocates, or more frequently subluxates, from its normal position in the intercondylar groove of the femur. As its name implies, the dislocation occurs on more than one occasion. The dislocation is always lateral. It occurs much more frequently in females than males. It may be associated with congenital joint laxity.

Two types of case are encountered. In the first a recurrence follows a simple traumatic dislocation in a previously normal knee. This type is very rare. The second and common variety occurs without any history of a major traumatic insult. The symptoms vary with the degree of subluxation. If the dislocation is minimal with a momentary slip, this may cause giving way of the knee and a feeling of insecurity. This is the type most likely to be mistaken for a meniscus lesion. If the dislocation is complete, the deformity is obvious; the patient however is usually more aware of the prominent uncovered medial femoral condyle than of the laterally dislocated patella. This variety may cause complete locking of the knee. Occasionally a permanent dislocation of the patella is seen. This seldom causes any significant disability, apart from inability to recover from the squatting position. It does not warrant surgical intervention.

The patella is a sesamoid bone which forms part of the extensor expansion. On movement of the knee and contraction of the quadriceps it alters its position in relation to the lower end of the femur. Its stability has been attributed to many factors, and instability to a deficiency in one or more of them. Thus it might appear that an abnormally shaped patella, or one which lay too high (patella vera alta), or was ill-contained by a sloping lateral femoral condyle, or a knee exhibiting a valgus or recurvatum deformity or poor musculature would be a common finding. This is not so, and the majority of knees presenting with recurrent dislocation appear remarkably normal. Apart from the symptoms,

one sign is of the utmost help in making a diagnosis. When the patella is displaced laterally by the examiner, the patient becomes apprehensive lest a dislocation be provoked.

Accompanying a recurrent dislocation or subluxation, damage frequently occurs to the articular surface both of the patella and the femoral condyle. This may lead to chondromalacia of the patella which in time may become frank osteoarthritis of the patello-femoral compartment.

SURGICAL TREATMENT

Once recurrence of the dislocation is established, conservative measures will not prevent it. Operative treatment is then indicated. Many operations have been devised for the treatment of this condition—in itself an indication that none is universally satisfactory. The operations most commonly performed have been designed to correct or control particular factors considered to be responsible for the condition. They vary in their ingenuity and complexity from relatively simple plastic soft-tissue corrections to more complicated extensor mechanism transplantations, with or without transposition of the tibial tubercle. Due to the extent of these operations and the inevitable interference with the existing quadriceps mechanism, the post-operative convalescence is often long and the morbidity not inconsiderable.

When there are undoubted predisposing factors, then it may well be wise to perform an operation designed to correct them. Hence the correction of genu valgum, elevation of a shallow femoral condyle, lowering of a high patella and medial displacement of the tibial quadriceps insertion all have a place. Indeed many of these operations are most successful in preventing recurrence. They are however major operations on the knee and it takes a long time to regain maximal functional recovery afterwards. Any operation in a child which interferes with the tibial attach-

ment of the quadriceps carries the risk of premature epiphyseal fusion of part of the upper tibial epiphysis. Depending on the exact location of this arrest, it may lead to genu recurvatum or valgum. Simple patellectomy alone has no place in the surgical treatment of this condition, for it will not prevent the quadriceps mechanism from dislocating afterwards. Only if degenerative changes are present should it be performed, and then always as part of some more extensive procedure.

As previously mentioned, the majority of patients presenting with recurrent dislocation appear to have normal knees. In absence of any obvious predisposing factors it does not seem logical to carry out a major surgical procedure if a simple measure will suffice. That a major operation may be successful is not itself an indication to perform it. It may be that only one stage of such an operation is really required, and the rest may be unnecessary. With this in mind the following operation has been carried out extensively though not exclusively at Westminster Hospital for some years. For want of a better name we have called it "lateral patella release".

The operation of lateral patella release

This operation is particularly suitable for the young patient before bone growth has ceased, for the majority of recurrent dislocations in which there are no obvious predisposing factors, and even for some in which there are. The principle is to relax the lateral pull of the extensor expansion and thus favour the pull of its medial component.

Through a lateral parapatellar incision the vastus lateralis insertion is visualised. An incision is now made into this expansion starting half an inch lateral and parallel to the lower pole of the patella and extending proximally for about four inches. This may be done with a knife or a pair of scissors. The division extends through the quadriceps but not into the knee joint. No significant trouble occurs, however, if the synovial membrane is inadvertently divided. The knee joint can then be flexed to a right angle and beyond to observe the lie of the patella, and the division of the quadriceps is extended if required. The skin only is sutured and a bandage applied. Quadriceps exercises are started forthwith and knee flexion encouraged within a few days. The operation is extra-articular and inflicts no significant trauma on the knee. Post-operative pain is negligible and

FIG. 1.—The operation of lateral patella release

rehabilitation even easier than after a routine arthrotomy. The patient is allowed home within ten to fourteen days, and often may not require subsequent physiotherapy. This is a minor operation. It forms part of many more extensive operations, and should it not prove completely effective, it in no way precludes the surgeon from carrying out a more extensive procedure. In our experience, however, this has not been required.

In conclusion, when it is decided that surgical treatment is indicated for recurrent lateral dislocation of the patella, serious consideration should be given to performing the minor operation of "lateral patella release" rather than a major operation.