Chirurgie
Orthopädie

PRAXIS KLINIK 2000

KNEE CAP/PATELLA

Recurrent dislocation of the Patella

This means the more or less spontaneous recurrent dislocation of the knee cap which is slipping out of the femoral groove during the very early phase of knee flexion. Whereas the first episodes of acute dislocation are very painful and need medical treatment in chronic stages the displacement of the patella is no longer too much painful and the patients generally are able to reduce the patella themselves. The main cause of these instabilities is congenital. Usually a flat femoral groove is combined with a high-riding patella, axial malalignement and external rotation of the tibia. Normal individuals have a well developed concave proximal femoral groove, but these patients have a flat or even convex femoral groove (trochlea). In combination with other pathological factors, this leads to a late centering of the knee cap in the trochlea with lateral displacement or even complete lateral dislocation. This happens usually in the first 15 to 20° of knee flexion. For diagnosis a thorough clinical examination, multiple x-rays on different levels between hip joint, knee joint and ankle joint are necessary.

Conservative treatment

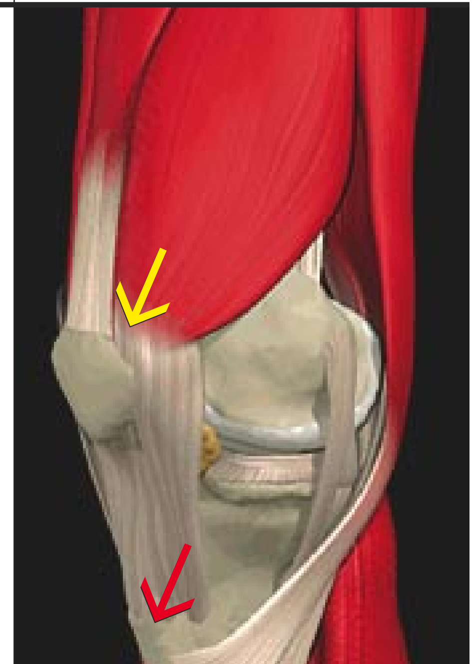
The patients should wear a soft knee brace with lateral support of the knee cap, whereas for the sessions during an intensive physiotherapy program lateral taping is most helpful. Unfortunately the majority of cases cannot compensate for this type of instability by conservative treatment alone and operative treatment is needed.

Operative technique

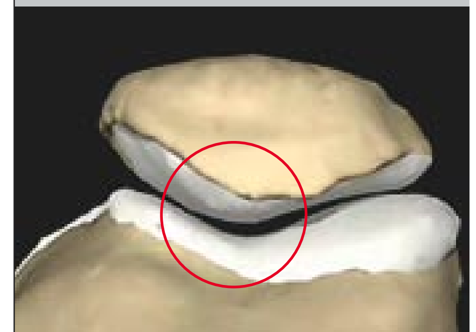
The approach is to correct each individual pathological factor. For example a high riding patella is put in a more distal position by transferring the anterior tibial tubercle. After solid fixation with 2 screws, functional treatment and partial weight bearing is possible. Another important step is the transfer of the musculus vastus medialis obliquus (VMO) more distally. As a consequence, the patella is pulled more medially. In cases with a convex proximal trochlea the proximal hypertrophic part of this "tongue" is resected and a more anatomical femoral groove is shaped. Very severe instabilities with axial and rotational malalignement may require osteotomies in 1, 2 or even 3 plains. Depending on the severity of the instability, the outcome of most of the procedures is satisfactory and the incidence of recurrence is low. The patients have to be hospitalised for only a couple of days and the intervention is followed by immediate functional treatment.

Rehabilitation

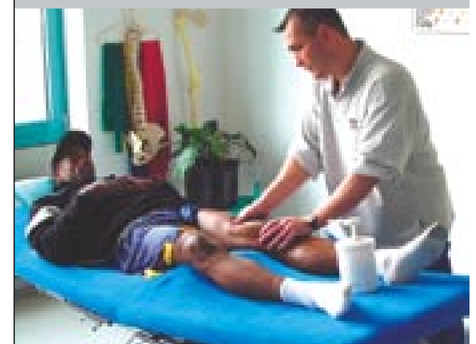
Continuous passive motion (CPM) is started immediately after the intervention and combined with one or two sessions of physiotherapy with active assisted exercises at one or two sessions daily. Sometimes straight leg raising against gravity may be prohibited for the time of bone healing due to the tubercle-transfer. After transfer of the VMO knee flexion should not exceed 80° during the first four weeks. Full weight bearing is allowed not before complete healing of the inner structures, i.e. 6 to 8 weeks. The period of physiotherapy should last for three months as a minimum.



- *distal transfer of patella tendon (red arrow)*
- *distal transfer of medial quadriceps tendon insertion at patella (yellow arrow)*



shaping of flat gliding truff which helps balancing the patella (red)



physiotherapy as important integral part of surgical and conservative treatment of patella dislocation

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