Combined proximal and distal realignment procedures to treat the habitual dislocation of the patella in adults

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摘要

Abstract

Background: Habitual dislocation of the patella (HDP) is a rare condition. Many surgical procedures using proximal realignment have been reported to treat HDP in children, with around 80% satisfactory results. However, few articles have addressed the treatment of HDP associated with high-grade patellofemoral chondromalacia in adults.

Hypothesis: A combination of proximal and distal realignment procedures of the patella will reduce pain and increase function in adult patients with HDP.

Study Design: Case series; Level of evidence, 4.

Methods: Twelve patients with 13 symptomatic cases of HDP of the knee underwent surgical treatment that included lateral release, medial retinaculum advancement, and the anteromedial tibial tubercle transfer procedure. The average period between dislocation and surgery was 10.8 years. One patient had an additional procedure, an open-wedge varus corrective osteotomy of the distal femur, because of a 20° valgus deformity of the knee. The patellofemoral morphology study included routine and Merchant views of the knee and a computed tomography scan at full extension and at 30° flexion of the knee, before the operation and at follow-up. Any associated intra-articular pathologic findings during the surgical procedure were addressed. Patellofemoral function was evaluated with the Kujala functional score before surgery and at the time of the final follow-up.

Results: Chondromalacia of the patella over the medial facet and central ridge was grade III in 8 knees and grade IV in 5 knees. Corresponding chondral erosion of the lateral

femoral condyle was noted in every knee. All patients were followed for an average period of 67.3 months (range, 25 – 103 months). The average preoperative Kujala functional score was 43.9 and the average postoperative score was 88.9 ($P < .05$). Radiographically, there was a statistically significant improvement in the congruence angle from 62.1° ± 15.0° preoperatively to −2.7° ± 9.8° postoperatively ($P < .01$) and in the lateral patellofemoral angle from −40.2° ± 9.3° preoperatively to 1.4° ± 7.0° postoperatively ($P < .01$). No patient has reported an episode of patellar dislocation after the surgical procedures.

Conclusion: Combined proximal and distal realignments of the patella effectively treat HDP in adults with associated high-grade patellofemoral chondromalacia.