

Case Report

Locked Lateral Patella Dislocation With Generalized Ligamentous Laxity After Arthroscopic Lateral Release of the Knee

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Abstract: We describe the case of a 14-year-old boy with patellar instability on both sides resulting from ligamentous hyperlaxity and dysplasia of the lateral femoral condyle who had previously undergone an arthroscopic lateral release as well as plication of the medial capsule. The patient presented to our clinic 2 years after surgery with a locked lateral patella dislocation on the left side. The surgical correction involved a substantial open lateral release including an excision of the scar tissue and stabilization of the patella in the patellofemoral groove by tibial tubercle medialization and plication of the medial capsule. Six months after surgery, the patient achieved a Lysholm score of 90 points and clinical examination indicated a stable knee with a centralized patella without any evidence of subluxation or dislocation. Open lateral release with partial resection of the lateral retinaculum, medial reconstruction, and tibial tubercle osteotomy was the procedure of choice in this patient with habitual patella dislocation caused by generalized ligamentous laxity. **Key Words:** Irreducible—Lateral patella dislocation—Generalized ligamentous laxity—Realignment—Arthroscopic lateral release.

Habitual dislocation of the patella often occurs during ordinary movement. Most commonly it is observed on the lateral side and only rarely on the medial, superior, or intra-articular side.¹ Predisposing factors for habitual lateral patella dislocation have been frequently reported and include generalized ligamentous laxity, dysplasia of the patella and femoral

condyles, as well as genu valgum and thigh lateral ligamentous structures.² Usually a spontaneous reduction occurs. A great variety of surgical procedures to approach recurrent patella subluxation or dislocation has been reported in the literature.³⁻¹²

The arthroscopic lateral release procedure of the extensor mechanism has been proven to be an adequate and successful treatment in cases without generalized ligamentous laxity and without subluxation on extension.² Both the open and arthroscopic procedures have the same goal of decreasing the lateral moment imposed on the lateral patella by an overly tight lateral retinaculum. Complications after arthroscopic lateral release are rare and include weakening of the quadriceps,¹³ medial patella dislocation,¹⁴ and hemarthrosis.³

We present a case of locked lateral patella dislocation in a 14-year-old boy with generalized ligamentous laxity and lateral femoral condyle dysplasia after

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an arthroscopic lateral release procedure. To our knowledge, this case is the first to be reported in the literature of such a complication after an arthroscopic lateral release procedure.

CASE REPORT

A 14-year-old boy presented with a locked patella dislocation on the left side. Two years prior, the patient underwent an arthroscopic lateral release procedure as well as a reconstruction of the medial capsule by plication because of recurrent patella subluxations associated with generalized ligamentous laxity as well as a dysplasia of the lateral femoral condyle at another hospital (Fig 1A and B).

Immediately after arthroscopic lateral release, the patient was mobilized on crutches accompanied by toe-touch weight bearing. For the first 3 weeks he was allowed to bend the knee with a maximum of 20° followed by increasing flexion and muscle strengthening.

On physical examination at his first visit to our clinic, the patient was unable to climb stairs without an orthosis. He also reported a feeling of instability in his left knee. Inspection revealed marked atrophy of the left quadriceps muscle with a side difference of 7 cm. The patient was unable to perform a straight leg raise, but the passive and active range of motion was

unlimited. On knee flexion, the patella was always palpable to the lateral femoral condyle. The tilt angle was neutral and the medial patellar glide was less than one quadrant. Furthermore, no swelling or effusion and no clinical evidence of a cruciate or collateral ligament instability could be detected.

The standard radiographs (anteroposterior and lateral views; Fig 2A and B) revealed a lateral dislocation of the patella (stage II according to Ficat¹⁵), early degenerative changes of the femoropatellar joint, a flat articular surface of the femur with a smooth intercondylar groove (160°), as well as a significant dysplasia of the lateral femoral condyle (stage I according to Dejour¹⁵).

The knee was exposed through a standard medial arthrotomy. The locked patella was mobilized by a substantial open lateral tissue release as well as an osteotomy of the tibial tuberosity. To replace the patella in the correct position, the tuberosity was refixated 1 cm medially using 2 screws (Fig 3A and B).

Postoperatively, the patient underwent physical therapy including a gradually increasing flexion and strengthening of the quadriceps. Six months after surgery, the patient was satisfied with the procedure. He had regained a normal gait pattern and had a stable knee with flexion up to 120° and good patellar tracking; the Lysholm score in a clinical evaluation 6 months after surgery was 90 points. Inspection after



FIGURE 1. (A) Standing and (B) seated views of the 14-year-old boy 2 years after arthroscopic lateral release resulting from generalized ligamentous laxity with a locked lateral patella dislocation.

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