

CURRENT CONCEPTS IN THE TREATMENT OF GROSS PATELLOFEMORAL INSTABILITY

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ABSTRACT

Patellofemoral instability is a painful and commonly recurring condition, which often must be managed surgically. Diagnosis can be aided by the use of a variety of physical exam signs, such as the Q angle, Beighton hypermobility score, glide test, J sign, patellar tilt test, and apprehension test. Imaging modalities including x-ray, CT, and MRI guide both diagnosis and management by revealing trochlear dysplasia, bony malalignment, and ligamentous injury that contribute to instability. Following an initial patellar dislocation, nonoperative management with bracing and physical therapy is an acceptable option, despite limited evidence that operative management may improve functional outcome and reduce recurrent dislocations.

For recurrent dislocations, operative management is indicated, and the appropriate procedure depends on the patient's anatomy and the cause of instability. Reconstruction of the medial patellofemoral ligament (MPFL) restores the primary soft tissue restraint to lateral patellar dislocations, and can be performed using a variety of techniques. In patients whose instability is related to bony malalignment, a tibial tubercle osteotomy is commonly performed to realign the extensor mechanism and establish proper patellar tracking. In patients with trochlear dysplasia, a trochleoplasty may be performed to create a sufficient groove for the patella to traverse. Often these procedures must be combined to address all causes of instability. The reported outcomes following all three of these procedures are generally very good, with the majority of patients experiencing functional improvements and a low rate of recurrent instability, although more large randomized controlled trials are needed to determine which techniques are most effective. The purpose of this clinical commentary is to provide an overview of the current methods employed by orthopedic surgeons to diagnose and manage patellar instability.

Level of Evidence: 5

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