Staged Hip Arthroscopy With Labral Reconstruction Followed by Femoral Derotation Osteotomy

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Background

Variations in femoral version play a large role in the biomechanics of the hip joint, particularly range of motion. This variation also may result in increased joint reactive forces, leading to osteoarthritis of the hip. In addition, version abnormalities, which are reported in approximately 50% of patients with symptomatic femoroacetabular impingement, may affect the severity of a cam or pincer deformity. In addition, femoral version affects the extent of extra-articular impingement. For example, patients with increased femoral version have more ischiofemoral impingement.

Purpose

This video details a case presentation of staged hip arthroscopy with labral reconstruction followed by femoral derotation osteotomy in a patient in whom prior labral repair with excessive femoral anteversion failed.

Methods

The diagnosis and treatment options for patients with combined labral pathology and femoral version abnormalities are discussed. The effect of femoral version on femoroacetabular impingement and labral injury is reviewed. The case presentation of a 23-year-old woman with left hip pain for 1 year is discussed. The patient had a history of left hip arthroscopy, labral repair, and cam/pincer resection 5 years ago. The patient was pain free for 4 years after this procedure. These symptoms were interfering with her activities of daily living. On physical examination, the patient had limited hip flexion, limited extension, and considerably more internal rotation compared with external rotation. Preoperative imaging studies demonstrated ischiofemoral impingement and femoral version of 29.5°. The decision was made to perform staged labral reconstruction and femoral derotation osteotomy.

Results

Left hip arthroscopy and labral reconstruction was performed with the use of a peroneal tendon allograft. One week after the labral reconstruction, a left femoral derotation osteotomy was performed. After the osteotomy was performed, the distal fragment of the femur was externally rotated 15°, and an intramedullary nail was placed for fixation. Postoperatively, the patient was instructed to remain flat-foot–weight bearing in a hip brace for 3 weeks. Progression of weight bearing was initiated at 3 weeks postoperatively. At follow-up, the patient had increased external rotation compared with that noted on preoperative physical examination.

Conclusion

Concomitant hip arthroscopy and femoral derotation osteotomy may be helpful in patients with combined labral pathology and version abnormalities. Outcomes data on the use of this combined procedure are sparse, but available evidence suggests that it has a substantial effect on functional outcomes and pain relief in patients with version abnormalities.