

Periacetabular Osteotomy after Failed Treatment with Hip Arthroscopy

Geneva Baca, BA, Paul F. Beaulé, MD, FRCSC, **John C. Clohisy, MD**,
Meghan Gottlieb, MSW, Michael B. Millis, MD, David A. Podeszwa,
Rafael J. Sierra, MD, Ernest Sink, MD, Gail E. Pashos, BS

Introduction: Treatment of symptomatic hip dysplasia has focused on corrective osteotomy surgery, while hip arthroscopy remains controversial. Improved understanding of the patient population that fails to improve with hip arthroscopy alone is important to guide future treatment of hip dysplasia. The purpose of this study was to define the patient population and clinical presentation of patients that fail hip arthroscopy, present with persistent symptoms, and are treated with periacetabular osteotomy (PAO).

Methods: A prospective, multi-center database of over 2250 hip preservation procedures was searched to identify patients who underwent a PAO, following a failed hip arthroscopy. Patients were analyzed by preoperative radiographs, clinical outcome scores, and intra-operative disease patterns.

Results: 30 patients (30 hips) diagnosed with acetabular dysplasia underwent PAO after failing hip arthroscopy. 87% of the patients were female, the average age at surgery was 27.3 years, and the average BMI was 24.1. The previous hip arthroscopies were performed on average 22 months prior to the PAO. 23% of the patients underwent 2 arthroscopies prior to PAO. The average lateral center edge angle was 14.7°, acetabular inclination 16.3°, and anterior center edge angle 16.8°. The average alpha angles were 51.1° and 54.6° on the frog lateral and Dunn view, respectively. Labral abnormalities and acetabular chondral disease were noted in 72% and 56% respectively of patients who had either an arthrotomy or arthroscopy performed at the time of PAO (N=22). The average modified Harris Hip Score was 53.5, WOMAC 56.9, SF-12 physical component 36.4, and UCLA 5.4 prior to PAO.

Conclusion: Failed hip arthroscopy and the need for PAO is most commonly observed in young female patients with mild to moderate acetabular dysplasia. These patients usually present approximately 2 years after arthroscopy with persistent/recurrent hip symptoms and major functional limitations. At revision surgery, labral and articular cartilage abnormalities are common.

