

Editorial Commentary: Revision Arthroscopy for Borderline Dysplastic Hips: A Borderline Surgical Indication



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Abstract: Patients with mild or borderline acetabular dysplasia who present with refractory hip pain are challenging patients. Recommending open versus arthroscopic surgery for these patients is a difficult decision, in part because there are conflicting data regarding the outcomes of these procedures. Equally challenging is deciding on a treatment course in a borderline dysplastic patient who has not responded to a previous arthroscopic surgery. Surgeons must give great consideration before recommending revision arthroscopy in this setting.

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Even as experience with hip-preservation surgery has increased exponentially over the past decade, patients with mild or borderline dysplasia have remained a challenging group. Well-designed recent studies have demonstrated excellent results after arthroscopic surgery in these patients,^{1,2} whereas others have demonstrated failure rates more than 30%.³ Whether it is due to reports of good clinical outcomes, improved arthroscopic technologies, the technically demanding nature and increased morbidity of periacetabular osteotomy (PAO), or the high prevalence of concomitant cam deformity in dysplastic hips,⁴ the use of hip arthroscopy in dysplastic patients has been increasing over recent years. With this increased use has come an increased number of failures,⁵ which present an equally challenging clinical scenario.

In their article, "Functional and Clinical Outcomes of Patients Undergoing Revision Hip Arthroscopy with Borderline Hip Dysplasia at 2-Year Follow-up," authors Cancienne, Beck, Kunze, Suppauksorn, Chahla, and Nho offer their short-term results of 10 patients with borderline dysplasia undergoing revision hip

arthroscopy.⁶ Although the authors noted improvements in patient-reported outcomes after revision arthroscopy, a very low proportion (20%-30%) of these patients achieved patient acceptable symptom state for these various patient-reported outcomes. This finding should really make surgeons think twice (at least) before recommending repeat arthroscopy in dysplastic patients.

There are numerous difficulties in treating patients with refractory mild hip dysplasia. First, defining "borderline" dysplasia is difficult. Radiographic parameters of acetabular coverage such as lateral and anterior center edge angles can be significantly altered by small discrepancies in x-ray technique,⁷ and hips with a "borderline" lateral center-edge angle frequently have other radiographic criteria suggestive of more severe dysplasia.⁸ Second, defining symptomatic dysplasia can be challenging. Up to 50% of patients with radiographic dysplasia will have radiographic cam deformity,⁴ and the clinical presentation of dysplasia and impingement can overlap. In addition, many dysplastic patients who have not responded to primary hip arthroscopy are referred to another center for consideration of revision surgery, which often obscures the details of their initial surgery.

In this challenging population, it is critically important to characterize each individual patient's pathology based on symptoms and physical examination, using radiographs as a confirmatory data point rather than the primary determinant of treatment recommendations.

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Focus on exacerbating factors (prolonged sitting vs prolonged weightbearing), signs of generalized laxity, internal rotation in flexion (limited vs excessive), positive provocative tests (flexion—adduction—internal rotation vs hyperextension—external rotation), etc., to help distinguish between symptomatic impingement and symptomatic instability. In this author's opinion, those patients with persistent symptomatic hip instability after hip arthroscopy should be indicated for PAO, even in the setting of only mild or borderline dysplasia. The results of PAO after failed hip arthroscopy have been shown to be reliable,^{9,10} although not as reliable as PAO without previous arthroscopy,¹⁰ highlighting the importance of making appropriate treatment recommendations the first time around in these patients.

Taking all of this into consideration, we clearly don't have all the answers in 2019 for treating this challenging patient population. Hopefully, future research will continue to shed light on best practices. Treatment decisions should be made on a case-by-case basis, taking all available information into account. But, for now, if you are going to scope a borderline dysplastic hip that has already failed a hip scope, you better have a good reason.

References

1. Domb BG, Chaharbakhshi EO, Perets I, Yuen LC, Walsh JP, Ashberg L. Hip arthroscopic surgery with labral preservation and capsular plication in patients with borderline hip dysplasia: Minimum 5-year patient-reported outcomes. *Am J Sports Med* 2018;46:305-313.
2. Fukui K, Briggs KK, Trindade CA, Philippon MJ. Outcomes after labral repair in patients with femoroacetabular impingement and borderline dysplasia. *Arthroscopy* 2015;31:2371-2379.
3. Larson CM, Ross JR, Stone RM, et al. Arthroscopic management of dysplastic hip deformities: Predictors of success and failures with comparison to an arthroscopic FAI cohort. *Am J Sports Med* 2016;44:447-453.
4. Kohno Y, Nakashima Y, Hatano T, et al. High prevalence of cam deformity in dysplastic hips: A three-dimensional CT study. *J Orthop Res* 2016;34:1613-1619.
5. Haynes JA, Pascual-Garrido C, An TW, Nepple JJ, Clohisy JC, Group A. Trends of hip arthroscopy in the setting of acetabular dysplasia. *J Hip Preserv Surg* 2018;5:267-273.
6. Cancienne J, Beck E, Kunze K, Suppauksorn S, Chahla J, Nho S. Functional and clinical outcomes of patients undergoing revision hip arthroscopy with borderline hip dysplasia at two year follow-up. *Arthroscopy* 2019;35:3240-3247.
7. Li RT, Hu E, Gould H, Valentin N, Salata MJ, Liu RW. Does pelvic rotation alter radiologic measurement of anterior and lateral acetabular coverage? *Arthroscopy* 2019;35:1111-1116.e1111.
8. McClincy MP, Wylie JD, Yen YM, Novais EN. Mild or borderline hip dysplasia: Are we characterizing hips with a lateral center-edge angle between 18° and 25° appropriately? *Am J Sports Med* 2019;47:112-122.
9. Kain MS, Novais EN, Vallim C, Millis MB, Kim YJ. Periacetabular osteotomy after failed hip arthroscopy for labral tears in patients with acetabular dysplasia. *J Bone Joint Surg Am* 2011;93:57-61 (suppl 2).
10. Novais EN, Coobs BR, Nepple JJ, Clohisy JC, Group AS. Previous failed hip arthroscopy negatively impacts early patient-reported outcomes of the periacetabular osteotomy: An ANCHOR Matched Cohort Study. *J Hip Preserv Surg* 2018;5:370-377.