

# Editorial Commentary: Hip Arthroscopy With Concomitant Periacetabular Osteotomy: Teamwork Makes This Dream Work



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**Abstract:** Arthroscopy provides a powerful tool to successfully treat intra-articular hip pathology secondary to dysplasia while improving the bony coverage/alignment with periacetabular osteotomy; a concept no different than high tibial osteotomy. Through a specialized team approach, all relevant pathology can be addressed and successful outcomes achieved.

See related article on page 826

**H**ip arthroscopy performed in the same setting as periacetabular osteotomy (PAO) sounds reasonable; however, the execution of acetabular reorientation immediately following hip arthroscopy is difficult and demonstrates admirable effort in the study entitled “Outcomes of Periacetabular Osteotomy With Concomitant Arthroscopy for the Treatment of Developmental Dysplasia of the Hip, Minimum 5-Year Follow-Up” by Maldonado, LaReau, Perets, Ortiz-Delet, Laseter, Lall, and Domb.<sup>1</sup> Favorable outcomes were achieved with this complementary approach in the treatment of hip dysplasia.

Beyond the specialized fellowship training required to execute these cases, the logistics require special attention. Hip arthroscopy requires a special table and arthroscopic equipment, whereas PAO requires a different table and its own specialized equipment. These factors and others make the ability to combine these highly complex surgeries into one setting an option for select centers only.

Should this complexity be the standard in the treatment of dysplasia with PAO? As the authors demonstrated, there were numerous procedures done at the time of arthroscopy that might not have been done

otherwise. In a study by Siebenrock et al.,<sup>2</sup> the authors reported unfavorable outcomes after PAO if there was a labral lesion, in addition to arthritis, older age, impingement, over correction, and undercorrection.<sup>3</sup> Arthroscopy provides the tool to address these labral lesions with labral repair and chondroplasty occurring in 75% and 43% of cases, respectively. After PAO, the once-dysplastic hip has normal morphology and pre-existing cam morphology will then impinge, leading to inferior outcomes, which is a finding published by Albers et al.<sup>4</sup> in long term follow-up after PAO. In the study by Maldonado et al., it was addressed with femoroplasty 63% of the time.

A study by Ricciardi et al.<sup>5</sup> compared patients who were treated with and without arthroscopy at the time of PAO. Arthroscopy was performed in those with symptomatic labral injury and magnetic resonance imaging findings suggestive of a repairable tear. There was a significantly greater International Hip Outcome Tool-33 score in the concomitant arthroscopy group. In the study by Maldonado et al., all patients who underwent PAO had arthroscopy. These studies advocate for combined arthroscopy/PAO, but further research is needed to clearly delineate which patients will benefit from a combined approach versus PAO alone. Magnetic resonance imaging findings, pain location and pattern, and diagnostic injection are some items to consider.

In my experience, patients do not often present for the first time with dysplastic type hip pain only. The inciting pain that leads to seek evaluation is often hip joint pain secondary to early or even significant soft tissue damage such as a labral tear. Because this is often

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the case, it is hard to conceptualize a patient benefiting purely from PAO and not an intra-articular procedure that addresses the labral tear or cartilage damage. Certainly, there is a spectrum of damage, and pain from labrum and cartilage overload without tear is a consideration. Given what we know from previous studies and from pathophysiology of dysplasia and labral tears, it seems prudent to strongly consider arthroscopy in addition to PAO in the treatment of hip dysplasia.

### References

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