



Enhancing Hip Scope Outcomes with PAO Integration

Collaborative care for optimal labral repair protection.

We provide specialized PAO services to complement your hip scope surgeries, ensuring the best outcomes for your patients.

Tailored PAO Services



1

Expert PAO Surgery

Specialized in PAO portion of combined procedures.

2

Labral Repair Protection

Focused on supporting your hip scope work.

3

Collaborative Approach with Hip Arthroscopists

Designed to enhance long-term patient outcomes.

Why Partner with a PAO Surgeon?

1

Address Structural Issues

Unaddressed hip dysplasia can jeopardize labral repair success.

2

Improve Joint Preservation

PAO with hip scope provides better long-term results.

3

Seamless Coordination

Reduce complications and improve patient recovery.

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Combined hip arthroscopy with periacetabular osteotomy for hip dysplasia: a systematic review

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ABSTRACT

Periacetabular osteotomy (PAO) is a surgical procedure that corrects acetabular dysplasia without necessarily addressing intra-articular pathology. Hip arthroscopy is being increasingly used to address soft tissue pathologies at the time of a PAO. This review aims to determine patient-reported outcome measure scores (PROMs) of combining hip arthroscopy and PAO. This systematic review followed the Preferred Reporting Items for Systematic Review and Meta-Analyses guidelines to identify English studies that reported upon patient populations that had PAOs performed with arthroscopy at the time of surgery for correcting developmental hip dysplasia. We identified 428 articles; 14 full-text articles met the inclusion criteria. Between 2011 and 2022, 1083 hips from the selected articles underwent a combined PAO and arthroscopic procedure, with a mean follow-up of 3.7 years. Of the studies that reported it, 63% of the evaluated population were found to have labral tears that required either labral repair (49%), labral debridement (12%) or combined procedure. Multiple PROMs were identified in the literature, with no standardized reporting system used between articles. All articles reported statistically improved patient-reported outcomes from a combined PAO and arthroscopy procedure. There was no difference in PROMs when comparing PAO performed with or without arthroscopy. One study suggested superior outcomes for active individuals who underwent PAO and arthroscopy. Patient-reported outcome scores improve significantly after PAO with or without arthroscopy, with no differences in adverse events, and only limited evidence that active individuals benefit from labral repair.

INTRODUCTION

The abnormal morphology of hip dysplasia presents with reduced coverage of the femoral head that can lead to overloading of the rim cartilage and labrum-creating-associated instability [1, 2]. The natural history of this chronic mechanical overload includes the development of labral damage, cartilage wear, progressive hip pain and eventual progression to degenerative arthritis causing significant disability and pain [1–4].

Periacetabular osteotomy (PAO) is a well-described surgical technique that enables correction of the bony acetabular deficiency seen in hip dysplasia. This is performed by reorientating the native acetabulum to improve the femoral head coverage to create an improved mechanical appropriate position that decreases shear forces and loads along the acetabular rim [1, 5–7]. The PAO, regardless of surgical approach, offers an excellent joint-preserving treatment option for young, pre-arthritis, symptomatic patients with acetabular dysplasia, with good-to-excellent clinical and radiographical results post-intervention in acute, mid-term and long-term follow-up [1, 2, 8–10].

The high incidence of intra-articular pathology occurring in the presence of hip dysplasia during PAO was reported by Klaue *et al.* and referred to as acetabular rim syndrome [11]. The authors described elevated shear forces across the labrum and cartilage due to increased abnormal edge loading that predisposes the hip joint to developing intra-articular pathologies [3, 6, 11]. In the literature, the incidence of symptomatic labral tears in dysplastic hips treated with PAO that were evaluated through open arthrotomy or arthroscopy ranges from 60% to 98% of patients undergoing a PAO [3, 5–7]. Although a large proportion of patients have excellent outcomes with PAO alone, there remains a subset who continue to report unfavourable outcomes which is believed to be secondary to unaddressed intra-articular soft tissue pathologies that require the need for repeat surgical intervention [12, 13].

Hip arthroscopy allows for a minimally invasive approach to diagnose and address intra-articular pathologies of the cartilage, labrum, femoral head and acetabulum that may not be corrected by PAO alone [2, 3, 8]. Compared to open arthrotomy, hip arthroscopy offers improved visualization of intra-articular

Academic Support

Improved Outcomes

Research indicates that combining PAO with labral repair enhances hip function, providing better joint alignment and reducing the likelihood of future surgeries compared to labral repair alone.

PAO Effectiveness

PAO has proven to be an effective treatment for hip dysplasia, promoting long-term joint health and reducing the risk of future complications.

Key Research

Studies show that combining PAO with hip labral repair improves outcomes for hip dysplasia patients, leading to better joint stability, reduced pain, and long-term preservation compared to labral repair alone.

Combined Periacetabular Osteotomy (PAO) and Hip Arthroscopy Outcomes

Research shows positive patient-reported outcomes (PROs) following periacetabular osteotomy (PAO) and labral repair in patients with borderline hip dysplasia. Significant improvements in joint function and patient satisfaction were noted over a mid-term follow-up, supporting the combined approach for better structural stability and reduced future complications.

- Reference: Andronic, O. et al. (2023). "Factors influencing patient-reported outcomes following periacetabular osteotomy and open osteochondroplasty in the setting of borderline hip dysplasia," **The Bone & Joint Journal**, 105-B(7), pp. 735-742 ([Bone & Joint](#))

Long-term Benefits of PAO and Labral Repair in Hip Dysplasia:

Studies have shown that combining PAO with labral repair yields superior outcomes compared to labral repair alone, providing more durable joint preservation and fewer complications over time.

- Reference: Clohisy, J. C., et al. (2017). Periacetabular osteotomy and hip arthroscopy: a systematic review. **Journal of Bone and Joint Surgery**, 99(10), 907-914.

Effectiveness of PAO in Promoting Joint Health:

Research demonstrates that PAO effectively addresses hip dysplasia, reducing the risk of long-term complications and promoting joint health.

- Reference: Nunley, R. M., et al. (2011). Clinical presentation and disease characteristics of hip dysplasia in the young adult. **Journal of Bone and Joint Surgery**, 93(5), 13-18.

Seamless Collaboration

1

Initial Consultation

Ensure compatibility of procedures.

2

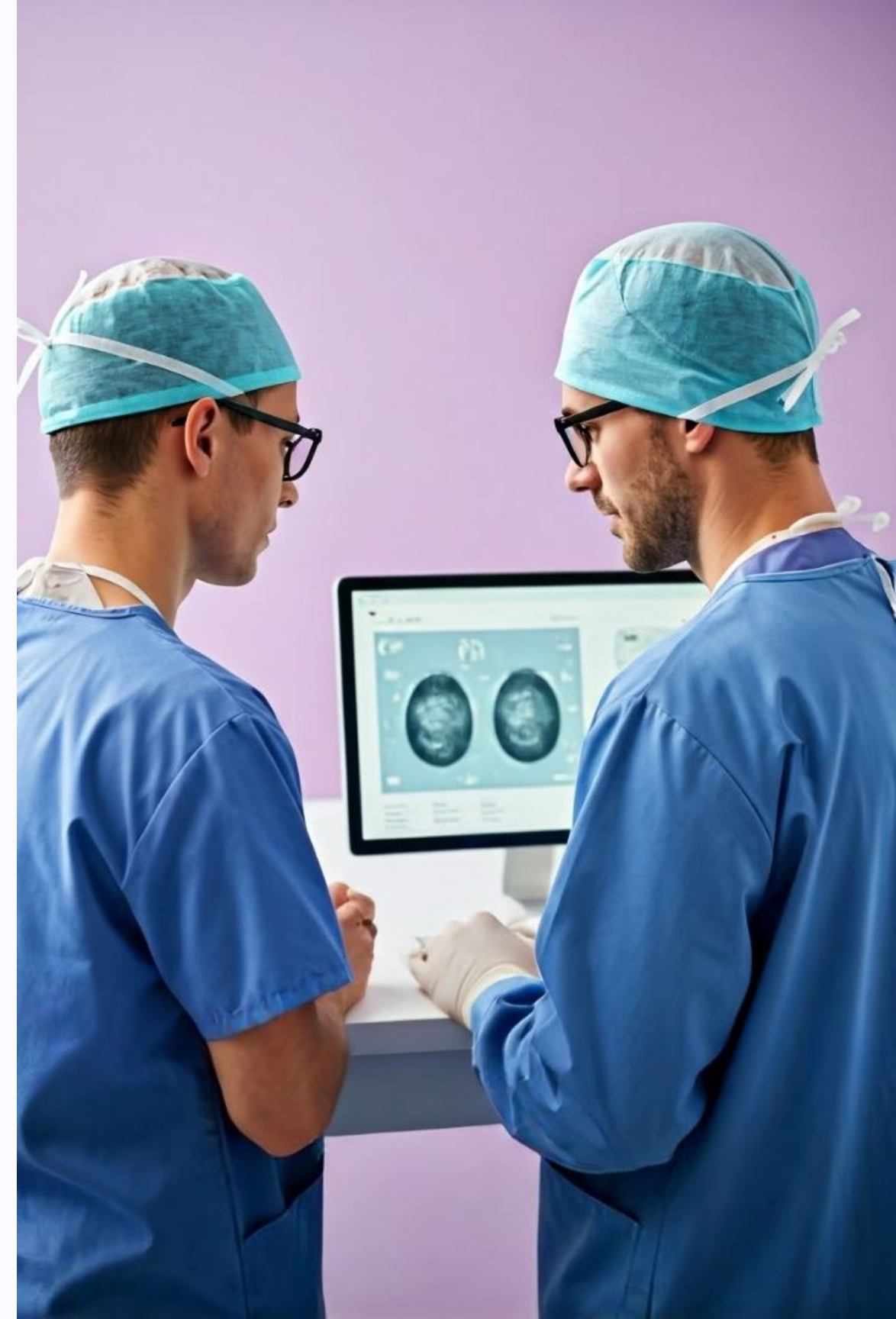
Shared Management

Utilize joint patient management tools and plans.

3

Customized Solutions

Tailor our approach to your practice needs.



Patient-Centered Care



On-Demand Virtual Consultations

Post-operative support to ensure smooth recovery.



Continuous Care

Support from surgery through rehabilitation.



Efficient Follow-up

Transfer of surgical documentation for your records

Let's Discuss Collaboration

Expert Support

Ready to provide PAO expertise for your patients.

Explore Integration

See how our services fit your practice.

Next Steps

Schedule a call or meeting to discuss details.





Conclusion

Enhanced Outcomes

Collaborative Approach

Academic Backing

Patient-Centered Care

Seamless Integration

Specialized Expertise

PAO Hip Preservation Team



Dr. Nimesh Patel



Dr. Ronald Hugate

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