

Editorial Commentary: Errors of Omission Versus Errors of Commission: The Case of Hip Labral Reconstruction



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Abstract: As hip arthroscopy grows at an increasingly rapid pace, hip surgeons are faced with significant challenges in addressing various pathologies, such as irreparable hip labral tears. As technology and skill sets evolve, the ability to perform hip labral reconstruction in the setting of irreparable labral tears becomes not a matter of “Can we” but rather “Should we” be doing these. Basic science studies have demonstrated the vital role of the hip labrum for normal hip functioning and chondral health. Furthermore, studies have demonstrated that hip reconstruction can restore much of the function of the native labrum when the labrum is removed. Systematic review of the composite literature of hip labral reconstruction in the setting of irreparable labral repairs demonstrates good improvements in pain and validated patient-reported outcomes in the short term with minimal follow-up of 1 year. The long-term benefits and ability to prevent or delay degenerative changes to the hip with labral reconstruction remain unknown.

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As the incidence of arthroscopic hip procedures has increased significantly over the past decade, so too has our understanding of the nuances of hip anatomy.^{1,2} Studies have demonstrated the crucial role the hip labrum plays in the normal functioning of the hip, including maintaining the fluid suction/seal, reductions in contact pressure on the articular cartilage, and stability.³⁻⁵ Symptomatic femoroacetabular impingement and labral pathology remain the most common reasons for performing hip arthroscopy, and while debridement and excision of the torn labrum can provide symptomatic improvement, it is now well understood that labral repairs are preferred over excision to maintain the native anatomy and the essential functions previously described for the native hip labrum.⁶⁻⁸ Not all labral tears are repairable, however, and depending upon the quality and pattern of tear, many are not able

to be preserved. This situation presents a conundrum to the hip surgeon: Do we excise the irreparable labrum and simply remove the pain generator, with demonstrated good short-term results for this, while also understanding that we are removing vital anatomy that plays an important role in the normal functioning of the hip (error of omission)? Alternatively, do we try to reconstruct the labrum using a graft, potentially restoring the anatomy and the important functions it provides, but also potentially introducing a source of continued pain, further cost, with minimal benefit or even possible worsened outcomes (error of commission)?

Trivedi, Sivasundaram, Su, Knapick, Mather, Nho, and Salata⁹ help us better understand the risks and benefits of labral reconstruction in their systematic review titled “Indications and Outcomes of Arthroscopic Labral Reconstruction of the Hip—A Systematic Review”. Using strict inclusion and exclusion criteria, these authors identified 11 studies that evaluated patient-reported outcomes after hip labral reconstruction using a variety of auto and allografts, as well as complications, failures, and progression of degenerative changes necessitating total hip arthroplasty. These authors found that hip labral reconstruction in the setting of an irreparable hip labral tear is a promising procedure with clinically

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significant improvement in patient-reported outcomes at least in the short term (1-year minimum outcomes). This makes sense in light of biomechanical and kinematic data including that by Nepple et al.,⁴ who found that hip labral reconstruction provided significantly improved maximal distraction force and suction/seal as compared with partial labral resection in a cadaver model.

While the rate of complications of labral reconstruction in this systematic review was generally low, the rate of conversion to hip arthroplasty was up to 18%. This remains significantly higher than the conversion to hip arthroplasty from hip arthroscopy epidemiologic data and still leaves many questions unanswered, including are the improvements seen from labral reconstruction similar to those of simple debridement and removal of the pain-generating tear and are we really prolonging the health and viability of the articular cartilage with reconstruction of the labrum?¹ Ultimately, comparative studies evaluating labral debridement versus labral reconstruction, with follow-up out to 5 years or more to evaluate short- and mid-term validated patient-reported outcomes, the durability of the response of short-term improvements, and ultimately the progression of degenerative changes in both groups are needed to more definitively answer these questions. In the meantime, the systematic review by Trivedi et al. demonstrates hip labral reconstruction to be a useful tool, at least in the short term, for providing clinically meaningful improvements in patients with hip labral tears not amenable to surgical repair.

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