Revision Hip Arthroscopy with Labral Reconstruction or Augmentation Demonstrate Favorable Patient Reported Outcomes: A Systematic Review

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INTRODUCTION: Labral tears, which are often associated with FAI, can necessitate surgical intervention if they are symptomatic and unresponsive to conservative treatment. While studies have reported short and mid-term outcomes on patients undergoing revision hip arthroscopy with labral reconstruction and augmentation, there has been no aggregate data summarizing these results. The purpose of this study is to review current literature evaluating patient-reported outcomes (PROs) and survivorship in patients undergoing revision hip arthroscopy with labral reconstruction or augmentation.

METHODS: A systematic review was performed with the following keywords: (revision) AND (hip OR femoroacetabular impingement) AND (arthroscopy OR arthroscopic) AND (reconstruction OR augmentation OR irreparable). PubMed, Cochrane Trials, and Scopus were queried in October 2022 using the criteria established in the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA). Studies were included if they involved patients undergoing revision hip arthroscopy using a labral reconstruction or augmentation and reported pre- and postoperative patient reported outcomes at minimum 2-year follow-up. Only original research articles were included. Survivorship was defined as a non-conversion to THA. Outcomes present in a minimum of three studies underwent further statistical analysis with forest plots. Heterogeneity of studies was evaluated using the I^2 statistic.

RESULTS: Eight studies met the inclusion criteria including 480 revision hip arthroscopies and with a follow-up that ranged from 2.2 - 5.2 years. Six studies reported on outcomes after revision labral reconstruction, one study reported on labral augmentation, and one study compared both. Six of the eight included studies evaluated for statistical significance between pre- and post-operative outcomes, and all six studies showed significant improvement in at least one PRO following revision labral reconstruction or augmentation. The two remaining studies showed improved PROs but did not evaluate for statistical significance. Both studies following revision labral augmentation reported over 80% of their cohorts achieving MCID in multiple PROs. Four out of six studies following revision labral reconstruction report at least 70% of their cohorts achieving MCID in at least one PRO. At minimum 2-year follow-up, survivorship for the revision labral augmentation studies were 93.5% and 97%, respectively, and survivorship for revision labral reconstruction ranged from 93.3% - 98.1%.

DISCUSSION: The main finding of this review was that patients undergoing revision hip arthroscopy with labral reconstruction or augmentation demonstrated statistically significant improvements in PROs and high rates of survivorship at minimum 2-year follow-up. Further, patients that underwent revision labral reconstruction and augmentation achieved psychometric thresholds at favorable rates with six of seven studies reporting at least 70% of patients achieved MCID in one or more PRO's. The review demonstrates that patients undergoing revision labral reconstruction or augmentation can experience significant improvement after hip arthroscopy.

However, only two studies reported results from revision augmentation, which prompts the necessity of additional outcome studies. The studies incorporated in this review were all level III or level IV. This review does not account for surgeon variability in skill level or for the advancements in labral reconstruction and augmentation techniques during its broad range of study periods, which may confound findings. Further, there was only one study that included outcomes on revision labral augmentation versus six that are focused on revision labral reconstructions.

SIGNIFICANCE/CLINICAL RELEVANCE: Patients that underwent revision hip arthroscopy with labral reconstruction or augmentation demonstrated significant improvement in PROs and high rates of survivorship at minimum 2-year follow-up ranging.

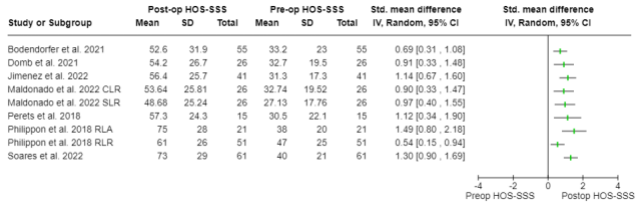

Figure 1. Forest plot for Hip Outcome Score – Sports Specific Subscale

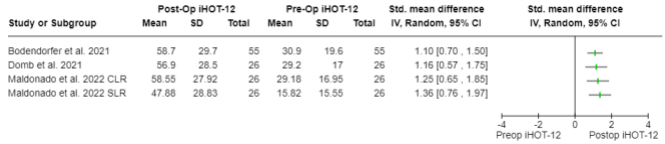

Figure 2. Forest Plot for International Hip Outcome Tool

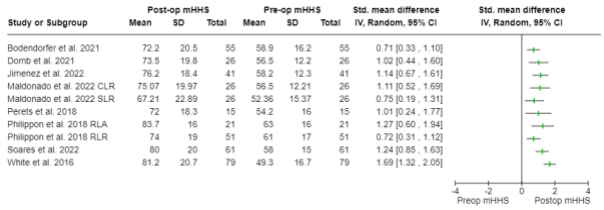

Figure 3. Forest plot for modified Harris Hip Score