

# The Efficacy of Endoscopic Gluteal Repair with Concomitant Arthroscopic Labral Treatment: A Systematic Review

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## ABSTRACT

**Introduction:** Chronic degenerative tears of the gluteus medius and minimus tendons are an increasingly well-recognized cause of greater trochanteric pain syndrome (GTPS), due in part to improved imaging modalities and other diagnostic techniques. Surgical repair of abductor tendon tears, with either an open or endoscopic approach, is considered for cases refractory to conservative measures. While both of these approaches have been shown to improve pain and functional outcomes, there appears to be a lower post-operative complication rate with the minimally-invasive endoscopic approach. However, few studies have specifically evaluated the efficacy of this combined procedure. There is a paucity of aggregate literature reporting on outcomes of combined endoscopic gluteal repair and concomitant hip arthroscopy. The purpose of this study was to systematically review the existing literature assessing clinical outcomes after endoscopic gluteal tendon repair with concomitant arthroscopic labral treatment.

**Methods:** The PubMed, Cochrane Trials, and Scopus databases were queried in May 2023 to conduct this systematic review using the key words “hip arthroscopy,” “gluteal,” “abductor,” “gluteus,” “minimus,” and “medius.” Articles were included if they reported preoperative and postoperative patient reported outcomes (PROs) for patients undergoing endoscopic gluteal repair with concomitant hip arthroscopy for the treatment of femoroacetabular impingement (FAI) and/or labral tears. Title, author, publication date, study design, demographics, preoperative radiographic findings (lateral center-edge angle (LCEA), alpha angle, and Tönnis Grade), concomitant surgical procedures, preoperative and postoperative PROs, measures of clinical benefit, and secondary surgeries performed (secondary arthroscopy, secondary gluteal repair, and THA) were recorded. Statistical significance was defined as  $P < 0.05$ .

**Results:** Five articles were included in the systematic review. A total of 223 hips were included, with average follow up times ranging from 26 to 74 months. All studies reported significant improvement in all recorded PROs from pre-operative to latest post-operative time points. Two studies that compared combined endoscopic gluteal repair and labral treatment with matched cohorts undergoing isolated hip arthroscopy found no statistically significant differences in outcomes between cohorts. There were low rates of secondary surgical procedures, including revision gluteal tendon repair, secondary hip arthroscopy, and conversion to THA.

**Discussion:** Patients who underwent endoscopic gluteal tendon repair with concomitant hip arthroscopy demonstrated significant improvements in PROs post-operatively with low rates of secondary procedures including revision gluteal repair and conversion to THA. Outcomes were comparable to matched controls who underwent hip arthroscopy without abductor tendon repair. However, multiple studies were from the same institution which may have caused some patient overlap. Moreover, the broad study period may have confounded outcomes as surgical techniques have evolved. Additionally, gluteal repair techniques were heterogenous which may add some heterogeneity into outcomes.

**Clinical Relevance:** This study found that patients that underwent endoscopic gluteal repair with concomitant hip arthroscopy had low rates of secondary surgery and improvements in PROs.