Outcomes of Surgical and Non-Surgical Treatments of Iliopsoas Impingement After Total Hip Arthroplasty: A Systematic Review and Meta-analysis

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INTRODUCTION: Iliopsoas impingement (IPI) is a rare cause of persistent groin pain after primary total hip arthroplasty (THA). Treatment options include conservative management, iliopsoas tenotomy, and acetabular revision. The purpose of this systematic review is to compare outcomes of non-operative versus operative treatment options of IPI after THA by assessing symptom resolution rate, patient reported outcomes (PROs), and complication rate.

METHODS: A systematic review following guidelines established by the Preferred Reporting Items for Systematic Reviews and Meta-analyses was performed in the PubMed, Embase, and Cochrane Library databases regarding IPI after THA. Studies were categorized based on the specific treatment modality: conservative treatment consisting of steroid injections, iliopsoas tenotomy, or acetabular revision.

RESULTS: Six studies (151 patients) discussed conservative treatment, 21 studies (452 patients) discussed iliopsoas tenotomy, and five studies (103 patients) discussed acetabular revision as treatment options for IPI after THA. The mean preoperative to postoperative Harris Hip Scores (HHS) for the three groups were 64.8 to 78.6 ($P = 0.03$), 54.9 to 83.1 ($P < 0.00001$), and 56 to 82.4 ($P < 0.00001$), respectively. The complication rate for surgical treatment was 2.3% in the iliopsoas tenotomy group and 15.7% in the acetabular revision group. Persisting IPI symptoms were noted in 53.6% (conservative), 17.8% (iliopsoas tenotomy), and 12.6% (acetabular revision) of patients. Further or revision surgery was required by 16.4% (conservative), 4.5% (iliopsoas tenotomy), and 3.9% (acetabular revision) of patients.

DISCUSSION AND CONCLUSION: Conservative management of IPI after THA may fail to provide long-term resolution of symptoms. While iliopsoas tenotomy and acetabular revision may both effectively treat IPI after THA, tenotomy has a significantly lower complication rate compared to acetabular revision. Thorough patient counseling is critical when discussing surgical treatment options for persistent IPI after THA given the increased morbidity associated with revision arthroplasty.