Incidence, Risk Factors, and Treatment Outcomes of Symptomatic Iliopsoas Tendinopathy after Total Hip Arthroplasty: A Single Surgeon Series of 1,602 Hips

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INTRODUCTION: Iliopsoas tendinopathy (IPT) can cause persistent groin pain after total hip arthroplasty (THA). The exact etiology and prognosis of this condition is not well understood. This study aimed to report the incidence, risk factors, and treatment outcomes of symptomatic IPT after primary THA.

METHODS: A retrospective case-control study was conducted on patients who underwent primary THA between January 2012 and May 2018. A total of 1,602 THAs (1,370 patients) performed by a single surgeon with an identical acetabular and femoral implant were included. Patient characteristics, component sizes, cup inclination and anteversion angles, and anteroinferior cup prominence (>8 mm) were compared between the patients with and without IPT. Changes in teardrop to lesser trochanter distance were measured to estimate changes in leg length and offset by THA. A multivariate logistic model was used to identify the risk factors for IPT. Treatment outcomes were compared between patients with arthroscopic iliopsoas tenotomy and those with nonsurgical management.

RESULTS: IPT was identified in 53 hips (3.3%) after THA. Patients with IPT had greater leg lengthening (12.3 mm vs. 9.3 mm; P=0.001) and higher prevalence of anteroinferior cup prominence (5.7% vs. 0.4%; P=0.002). There was no significant difference in inclination, anteversion angle, and offset changes between the patients with and without IPT. In multivariate analysis, female sex, higher body mass index, prominent acetabular cup, and greater leg lengthening were found to be associated with IPT. All patients reported improvement in groin pain after arthroscopic surgery, while 35.7% reported improvement after nonsurgical management (P<0.001).

DISCUSSION AND CONCLUSION: Symptomatic IPT occurred in 53 (3.3%) of the 1,602 primary THAs. Our findings suggest that leg lengthening as well as the prominent acetabular cup in THA is related to the development of IPT. More attention may be warranted for female patients and those with a higher BMI. Arthroscopic iliopsoas tenotomy was effective in relieving groin pain caused by IPT.