Postoperative Outcomes for Concomitant Total Hip Arthroplasty with Abductor Repair

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Background: Total hip arthroplasty (THA) is a well-established procedure with high rates of success and patient satisfaction for patients with hip arthritis. Hip abductor complex tears are well known to cause lateral hip pain and weakness, both in native hips and patients undergoing THA. As of yet, there is lack of consensus on appropriate management of concomitant hip arthritis with abductor tears. Additionally, there is insufficient data on the expected outcomes of concomitant THA with abductor repair (THA+AR) to properly inform patients. The purpose of this study was to compare patient reported outcomes of THA with and without concomitant abductor repair, at a high-volume tertiary referral center.

Methods: This was a retrospective cohort study of patients who underwent primary THA with or without concomitant hip abductor repair at a single institution, performed by 12 different surgeons from July 2016 to October 2024. Patient medical history, demographic information, surgical characteristics, and postoperative complications were recorded. Abductor tear type was also classified into Type 1 (no evidence of gluteus medius avulsion from the bone) or Type 2 (gluteus medius avulsion from the bone). Additionally, after the cohort was identified, a prospective single postoperative timepoint survey was conducted to assess patient satisfaction, pain, and hip function (Hip Disability and Osteoarthritis Outcome Score for Joint Replacement [HOOS Jr.]). On the HOOS Jr. a 0 indicates total hip disability and a 100 indicates perfect function. The satisfaction survey utilized a 5-point Likert scale (Strongly disagree → Strongly Disagree) where answer choices were grouped 1 / 2 (strongly disagree, disagree), 3 (neutral), and 4 / 5 (agree, strongly agree) due to small sample sizes. Patients that were deceased, did not speak English, had a THA performed for fracture, or had a postoperative revision hip procedure were not contacted for the prospective survey component. Subanalysis was performed on survey scores between Type 1 and Type 2 abductor tendon tears. Continuous outcomes were assessed with an independent samples two-tailed t-test and qualitative outcomes were assessed by Fisher's exact tests.

Results: There were 83 THA+AR patients identified and 69 random primary THA only patients reviewed. After removing ineligible survey participants, 67/135 (51.1%) patients responded including 37 THA+AR patients and 30 THA only patients. Of the survey responders, there was a signficiant difference in age (THA+AR 72.4 ± 6.4 years vs 68.6 ± 9.4, $P < 0.001$) and body mass index (THA+AR 29.3 ± 4.8 vs 27.5 ± 4.6, $P < 0.001$), Elixhauser Comorbidity Index score (THA+AR 5.2 ± 3.9 vs 3.1 ± 2.8, $P < 0.001$), and amount of follow-up from day of surgery (THA+AR 43.5 ± 26.7 months vs 57.0 ± 8.6, $P < 0.001$). The THA+AR group scored lower on the HOOS Jr. (THA+AR 79.3 ± 18.5 vs 91.1 ± 11.1, $P < 0.001$). When patients were asked satisfaction with pain relief, walking ability, return to function post surgery as well as if they would have the surgery again the THA+AR group consistently scored lower than the THA only group ($P < 0.001$, Table 1). When Type 1 and Type 2 abductor tears were compared (Table 2), Type 1 patients were more satisfied with their walking ability (66.7% versus 22.2%, $P = 0.049$) and return to function (66.7% vs 22.2%, $P = 0.049$). For HOOS Jr. Scores, there was no significant difference between Type 1 and 2 tear patients (81.4 ± 17.4 versus 70.9 ± 20.4, $P = 0.190$).

Conclusion: Patients undergoing isolated THA have better patient reported outcome scores post-operatively compared to patients undergoing THA with concomittant abductor repair.

Discussion: For those patients undergoing abductor repair, tear type has a significant effect on patient satisfaction with postoperative walking ability and return to function.