

Performing Total Hip Arthroplasty Before Lumbar Spinal Fusion is Associated with Worse Hip Patient Reported Outcome Measures

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INTRODUCTION:

Many patients have concomitant hip and lumbar spine pathology necessitating total hip arthroplasty (THA) and lumbar spinal fusion (LSF). However, the effect of surgical sequence on functional outcomes is not well understood. This study was conducted to determine whether performing THA or LSF first results in differing hip functional outcomes. We hypothesized that patients undergoing THA before LSF would have worse hip functionality.

METHODS: A retrospective study was conducted at a tertiary academic center. Inclusion criteria comprised patients who underwent both THA and LSF and had a minimum of one-year follow-up from the last operation for the Hip Disability and Osteoarthritis Outcome Score Junior (HOOS-JR). Exclusion criteria consisted of revision THA. Statistical analysis consisted of T-tests and Chi-Square tests, and statistical significance was defined as a p-value < 0.05.

RESULTS: 208 patients underwent LSF first, while 83 patients underwent THA first. While there were no significant differences in body mass index, Charlson Comorbidity Index, race, and sex between the two cohorts, patients undergoing THA first were significantly younger (64.3 vs. 66.8; p = 0.033). Despite no significant differences existing between patients undergoing THA first or LSF first for preoperative HOOS-JR (46.8 vs. 44.2; p = 0.304), patients undergoing THA first had a significantly lower postoperative HOOS-JR (71.2 vs. 77.7; p = 0.034). Patients undergoing THA first had a significantly lower delta HOOS-JR (26.9 vs. 34.6; p = 0.022) and a lower rate of reaching the minimal clinically important difference (61.5% vs. 76.5%; p = 0.031), compared to patients undergoing LSF first.

DISCUSSION AND CONCLUSION: Patients undergoing THA before LSF have poorer hip functional outcomes than patients undergoing LSF before THA. For patients with concomitant hip and lumbar spine pathology, surgeons may want to counsel patients to undergo LSF prior to undergoing THA when clinically indicated.