

The Impact of Prior Colectomy on Outcomes and Complications Following Total Hip Arthroplasty: A Propensity Score-Match Analysis

Introduction: There is limited literature evaluating the impact of prior colectomy on long-term outcomes after total hip arthroplasty (THA) surgery. This study compared outcomes via retrospective analysis between patients with and without prior colectomy undergoing surgery for THA.

Methods: Using the National Inpatient Sample, patients admitted from 2005 to 2012 with an ICD9 code of prior colectomy (V4572, 4571, 4572, 4573, 4574, 4575, 4576, 4579, 4581, 4582, 4583) who underwent THA were reviewed. A propensity score-match (PSM) by age, gender, and obesity status was performed. Univariate analyses evaluated demographics, complications, subsequent revision, and mortality. Multivariate binary logistic regression models identified correlations between prior colectomy and postoperative THA outcomes.

Results: A total of 1171 PSM patients were identified (colectomy: n=1171; non-colectomy: n=1171). Both cohorts were nearly identical in age (colectomy: 70.39 years, non-colectomy: 70.31 years p=0.866), gender (colectomy: 56.1% female, non-colectomy: 56.6% female p=0.803), and obesity status (colectomy: 13.2%, non-colectomy: 12.5% p=0.578). The colectomy cohort had a higher Deyo score (0.81 vs. 0.61, p<0.001), length of stay (5.07 days vs. 3.76 days, p<0.001), and total hospital charge (\$61,108.36 vs. \$48,518.86, p<0.001). Patients with colectomy had higher rates of surgical complications and medical complications, including altered mental status, pulmonary complications, gastrointestinal complications, acute renal failure, sepsis, and mortality (all, p<0.05).

Conclusion: Patients with prior colectomy had higher Deyo scores, surgical charges, length of stay, and a higher risk of surgical and medical complications. These results can support management of postoperative expectations and concerns in this patient cohort.