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Varag Abed M.D.

Advisor(s): Qais Naziri M.D.

Co-author(s):

Increased Institutional Discharge Disposition in Chronic Obstructive Pulmonary Disease Patients Undergoing Primary Total Hip Arthroplasty: A Nationwide Analysis

Introduction: Total hip arthroplasty (THA) is among the most common surgical procedures in the United States. The need for institutional care following THA can significantly increase the burden on the healthcare system, leading to higher costs and resource utilization. This study sought to assess the relationship between Chronic Obstructive Pulmonary Disease (COPD) and institution discharge disposition among patients who underwent primary THA.

Methods: A retrospective cohort study was performed using the National Inpatient Sample database of primary THA occurring between 2010 and 2021. The primary exposure was a diagnosis of COPD. Confounding variables were basic demographics, baseline health status, and surgical facility characteristics. The primary outcome studied was institutional discharge disposition. Univariate analyses were performed to assess differences between cohorts. Multivariable regression analysis that adjusted for confounding variables was performed to identify institutional discharge disposition of patients with COPD undergoing THA.

Results: Our study identified 819,733 cases of primary THA that fulfilled study inclusion criteria, of which 59,845 (7.30%) had a diagnosis of COPD. Many patients in both cohorts had female sex, White race, and Medicare insurance. Most procedures were performed in large, urban-teaching, and private, non-profit hospitals. On multivariable regression analysis, compared to patients without COPD, those with COPD had 1.33 times higher (95% CI 1.30-1.36; $p < 0.001$) odds of institutional discharge disposition.

Discussion and Conclusion: Compared to patients without COPD, those with COPD undergoing primary THA demonstrated a significantly higher risk of requiring institutional discharge. This finding signifies the need for targeted preoperative optimization and discharge planning tailored to this high-risk population. Further research is essential to explore interventions that reduce institutional discharge rates for THA.