

A47

Faisal Arash M.D.

Advisor(s): Qais Naziri M.D.

Co-author(s):

Obstructive Sleep Apnea Increases Risk of Medical Complications After Primary Total Hip Arthroplasty

Introduction:

Obstructive sleep apnea (OSA) is associated with a plethora of comorbidities, including obesity, cardiovascular disease, diabetes, asthma, and GI dysfunction, all of which may increase the risk of complications post-total hip arthroplasty (THA). This study aimed to evaluate post-operative complications among OSA patients who underwent primary THA.

Methods:

A retrospective cohort study was conducted using the National Inpatient Sample database of primary THA cases between 2010-2021 with OSA diagnosis as primary exposure. Potential confounders included demographics, pre-operative health status, and surgical facility characteristics. The primary outcomes were procedure-related complications which includes acute myocardial infarctions, pneumonia, sepsis, septicemia, septic shock, surgical site complications (e.g., bleeding and infection), pulmonary embolism, deep vein thrombosis, periprosthetic joint infection, and mechanical complications. Univariate analyses were performed to assess potential cohort differences. A multivariable regression analysis, adjusted for confounding variables, assessed postoperative complications risk of THA patients with OSA.

Results:

Of 819,733 THA cases that met study inclusion criteria, 94,835 (11.57%) had an OSA diagnosis. Many patients in both cohorts were 60-69 years old, had White race, Medicare insurance, and Charlson comorbidity index of 0. Many of the procedures were performed in large, urban-teaching, and private, non-profit hospitals. Overall, patients with OSA had 1.04 times higher (95% CI: 1.01-1.07, $p=0.016$) odds to have a procedure related complication after primary THA.

Discussion/Conclusion:

Patients with OSA who underwent THA were at greater risk for procedure-related complications. Future research to understand the risk stratification in patients with OSA undergoing primary THA is crucial to efficiently optimize outcomes.