

## **Obstructive Sleep Apnea Does Not Preclude Outpatient Total Shoulder Arthroplasty with Regional Anesthesia**

Jessica Lynne Churchill, Timothy Domashevich, Sean Edward Higinbotham, Brandi Ann Krieg, Lauren Grobaty

**INTRODUCTION:** Obstructive sleep apnea (OSA) is increasingly recognized as a significant comorbidity in orthopedic surgery due to its strong association with obesity and its potential to increase postoperative complications. This has been dogmatically adopted as a relative contraindication for same-day total shoulder arthroplasty (TSA) due to the theoretically problematic combination of an existing state of respiratory compromise with an interscalene nerve block further diminishing diaphragmatic function. Literature on this topic is limited with no clear consensus. We assert that OSA can be safely managed for same-day TSA.

**METHODS:** Following Institutional Review Board approval, 107 patients were retrospectively identified through the electronic medical record, including 22 with a documented diagnosis of (OSA) confirmed by either clinical documentation or prior sleep study. Demographic data, perioperative characteristics, comorbidity count, hospital length of stay, and postoperative emergency department (ED) visits were collected. Postoperative ED visits, particularly for respiratory complications, were used as the primary outcome measure to assess potential associations with OSA.

**RESULTS:** Baseline characteristics, perioperative factors, and postoperative outcomes were compared between OSA and non-OSA patients. Demographics and surgical characteristics were largely similar between groups, except for significantly higher body mass index in the OSA cohort ( $p = 0.042$ ). Postoperative ED visits occurred in 11.2% of patients, with no significant difference between OSA (9.1%) and non-OSA (11.8%) groups ( $p = 0.99$ ). Multivariable logistic regression adjusting for confounders showed that OSA was not an independent predictor of ED visits ( $p = 0.298$ ). Increasing age ( $p = 0.0396$ ) and comorbidity count ( $p = 0.0413$ ) were positively associated with ED return.

**DISCUSSION AND CONCLUSION:** Patients with sleep apnea did not have an increased risk of immediate readmission or respiratory complication from the nerve block utilized for same-day TSA. These findings suggest that same-day TSA may be performed safely in OSA patients when managed with appropriate perioperative care.