Predictors of perioperative complications following single or combination nasal-palatopharyngeal surgery for severe obstructive sleep apnoea

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Introduction: To assess the relationship between perioperative complications and upper airway surgeries for obstructive sleep apnoea (OSA). Methods: The records of 118 adult patients, diagnosed with obstructive sleep apnoea (apnoea-hypopnoea index (AHI) >5), who underwent upper airway surgery at a single tertiary referral hospital from 2007 to 2015 were reviewed. Pulmonary, surgical, and cardiovascular complications within the first 30 postoperative days were analyzed according to types of upper airway surgery. Upper airway surgery types were single surgery or combinations of surgeries to the tonsils, pharyngeal adenoids, soft palate, tongue base and nose. Logistic regression was used to assess the multivariable association of age, sex, BMI, OSA severity, medical comorbidity, and types of upper airway surgery with postoperative complications. Results: At least one perioperative complication occurred in 48 of 128 patients (37.5%). In a multivariable model, the overall complication rate was increased with age, obesity, smoking and underlying comorbid medical problems. Complication rates were not associated with AHI severity, types of procedures performed and whether the surgery was a single or combination surgery. Conclusions: In OSA patients undergoing upper airway surgery, the severity of OSA as assessed by the AHI, and the sites and numbers of concurrent surgery performed were not associated with the rate of perioperative complications.

KEYWORDS: Perioperative complications, obstructive sleep apnoea, surgery, upper airway