OBJECTIVES: Determine the incidence and characterize perioperative airway complications in patients who have undergone medialization thyroplasty (MT) and subsequently undergo procedures requiring anesthesia.

STUDY DESIGN: Retrospective review of post-MT anesthesia encounters in a large academic hospital.

METHODS: A series of post-MT patients was reviewed, identifying anesthesia encounters undergoing endotracheal intubation (ETI) or laryngeal mask airway (LMA) placement. Details on the perioperative course of each encounter were extracted and examined for evidence of airway complications. The incidence of airway obstruction and need for airway intervention were determined and compared to those of control patients matched for type of procedure. Relationships between complications and perioperative management were analyzed.

RESULTS: A total of 74 anesthesia encounters were identified among 219 post-MT patients. Perioperative airway complications were noted in 5 procedures (6.8% 95% CI: 1.0-12.4%). Stridor in the operating or recovery room was observed in 3 cases (4.1%) and subsequently moderate stridor was noted in 2 cases (2.7%). Among 79 MT case were compiled and controls patients matched according to CPT codes were randomly extracted from a hospital database. Post-MT patients undergoing subsequent procedures and 0% incidence in matched controls represent the first report of a statistically significant increase in the risk of airway complications in post-MT patients. The 6.8% [95% CI: 1.0-12.4%] incidence of perioperative airway complications found in post-MT patients undergoing subsequent procedures and 0% incidence in matched controls represent the first report of a statistically significant increase in the risk of airway complications in post-MT patients.

Conclusions: The incidence of perioperative airway complications in post-MT patients is non-negligible and may be severe. Surgical, anesthesia and recovery room staff should be made aware of the significantly increased risk of airway complications in post-MT patients.

INTRODUCTION

- Unilateral vocal cord paralysis (UVCP) is the most common neuromuscular disorder of the larynx.1
- The pulmonary risks, dysphagia and phonological deficits associated with UVCP have recently been successfully addressed by cord medialization.2 Kraus et al. found that as many as 93% of UVCP patients experienced improved vocal and swallowing function and pulmonary and nutritional status following medialization procedures.3
- Friedlander et al. recognized that an increased potential for life-threatening complications involving the airway likely exists in post-MT patients and stressed the importance of maintaining an elevated level of caution in the perioperative period due to their narrowed glottic aperture and decreased ability to tolerate laryngeal edema.
- However they found that none of 17 patients who underwent surgical procedures following MT experienced any post-intubation airway complications.4
- We drew upon our institutional MT experience to better determine the true incidence of perioperative airway complications in post-MT patients who undergo subsequent procedures requiring general anesthesia.

RESULTS

- A total of 74 anesthesia encounters were identified (28 women; mean age: 61.0 years; 61 ETI / 13 LMA encounters).
- Perioperative airway complications arose in 5 procedures (6.8%; 95% confidence interval: 1.0-12.4%).
- Mild to moderate stridor was noted in 3 cases (4.1%) following endotracheal tube extubation, requiring nebulized racemic epinephrine and intravenous steroids for resolution.
- One patient (1.4%) underwent an urgent tracheotomy for severe stridor following extubation, leading to airway compromise in the recovery room.

CONCLUSIONS

- Post-MT patients have a significantly higher risk of experiencing a perioperative airway complication during a subsequent procedure when compared to patients who have not undergone MT.
- These complications requiring medical or surgical intervention may occur in roughly 1 in 15 post-MT patients.
- All perioperative personnel should be made aware of post-MT patients, as this knowledge may influence patient care by the surgeon, anesthesiologist and recovery room staff.

REFERENCES