We identified 1069 procedures (in 608 individual patients) during the study timeframe.

510 ASA- and age-matched orthopedic cases (in 403 individual patients) were identified in the comparison group.

The prevalence of difficult intubation was significantly higher than that of the matched cohort (8.0% vs 1.9%; p < .001)

There were no statistical differences regarding diagnosis date or the presence of goiter on the prevalence of difficult intubation.

Patients with reported difficult intubation had a slightly longer PACU LOS (117.4 +/- 69.2 min vs. 93.7 +/- 51.8 min) (p=.042).

23 cases required an escalation of post-operative care (i.e. ICU), of which 8 cases were due to airway complications.

The ETT was downsized by 0.5 mm after initial successful intubation in 11 procedures (1.0%).

METHODS

Using relevant ICD-9 codes, we queried our institutional database for patients with any thyroid disorder receiving intubation for elective surgery at our institution between June 2012 and February 2016.

We used age and ASA classification to match cases with patients without concurrent thyroid disorders.

Information regarding demographics, airway management and inpatient status was collected for each procedure.

Outcomes include: airway attempts, modifications, desaturations, (SpO2 <80% for >1 minute), atropine use, PACU length-of-stay (LOS), or unplanned inpatient or ICU stay.

Laryngoscopy was considered difficult if 1) a Cormack-Lehane grade view of III or IV was obtained; 2) three or more attempts were required to secure the airway; or 3) if the anesthesia provider reported a difficult intubation.

CONCLUSIONS

The incidence of difficult intubation in our pediatric study population with thyroid disorders is slightly higher than that of the general pediatric or adult population, although not specific to patients with a diagnosis of goiter.

Further inter-institutional comparisons with age- and ASA-matched case controls can elucidate a clear difference in difficult airway management incidence.