Yet, Another Cause of Iatrogenic Stridor?

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**Introduction:** Laryngomalacia is the number one cause of stridor in infants and vocal cord paralysis is the second most common. Thyroid surgery is by far the most important causative factor in causing postoperative stridor due to bilateral recurrent nerve palsies. Other causes of stridor include lesions of the supraglottic airway, larynx and trachea. Post-surgical stridor occurs rarely. Some causes include: tracheal rupture after tracheal resection, postpneumonectomy, drainage of hydrocephalus, patent ductus arteriosus surgery, dental surgery, and tonsillectomy and adenoidectomy in obstructive sleep apnea patients. We present yet another cause of stridor presenting two days after thyroglossal duct cyst removal surgery. To the best of our knowledge, post thyroglossal duct cyst surgery presenting as stridor has not been reported in the pediatric anesthesia literature and we feel that it should be included in the differential diagnosis of post surgical iatrogenic stridor.

**Case Report:**
Two days prior to admission at our hospital, a 3 and ½ year old patient, 17 kgs, underwent excision of a suspected thyroglossal duct cyst at another institution where intubation was difficult as per hospital transfer notes. A 4.5 endotracheal uncuffed tube was placed ‘atraumatically.’ The pathology reported that cartilage was present in the tissue removed. The patient presented to our operating room with upper airway obstruction and stridor. On physical exam, the patient was hoarse, alert and responsive. For the induction of anesthesia, oxygen was administered and intravenous anesthesia was induced with propofol 25 mg and fentanyl 55 mcg. The surgeon performed micro-direct laryngoscopy and bronchoscopy with spontaneous patient respirations. The surgical finding included: suture ligation of the pinched superior supraglottic region, circumferential injury of the subglottic tissue with associated edema. The trachea was intubated uneventfully with a 3.5 endotracheal tube and was later changed to a 4.5 endotracheal tube after release of the constricting submucosal suture. Mitomycin-C was applied to the mucosa to prevent subglottic stenosis. Exploration of the neck revealed excision of significant portion of the superior aspect of the right thyroid ala, and mucosal violation upwards into the neck. Dexamethasone 8 mgs IV were administered to decrease mucosal edema.

After surgery, the trachea of the patient was extubated. Postoperative treatments included nebulization with racemic epinephrine (0.25 mls in 3 mls of normal saline) every 4 hours as needed and dexamethasone 4 mgs IV every 12 hours. The immediate post-operative course was uneventful and significant for lack of stridor.

**Discussion:** Iatrogenic stridor is rare. Stridor with thyroglossal duct cyst removal surgery has never been reported in pediatric patients. We present yet another case of
iatrogenic stridor after a simple thyroglossal duct cyst removal and feel that it should be included in the differential diagnosis of post surgical stridor.

References: