

Degani J, Dierdorf S, Matt B

Riley Hospital for Children , Indianapolis , IN, USA

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Posterior subglottic membrane is a very rare cause of subglottic stenosis and difficult intubation and may be a complication of endotracheal intubation or reflux/aspiration. We present a case report of unanticipated difficult intubation secondary to an isolated posterior subglottic web with only 2-3mm of patent airway. A four month old female with history of multiple aspiration pneumonias presented for laparoscopic Nissen fundoplication and gastric tube placement. The patient was born full term by elective repeat cesarean section and experienced poor intake by mouth necessitating NG tube feeding. Upper GI studies demonstrated aspiration with PO feeding, and NG tube feedings were continued. In the interval prior to presentation, the patient had four hospital admissions for viral positive respiratory infections, two of which necessitated intubation for respiratory failure. During the most recent intubation two months prior to presentation, the patient had undergone bronchoscopy which ruled out subglottic stenosis and reported only mild tracheomalacia. There was no history of difficult intubation. The patient continued having episodes of gagging with suspected aspiration during NG tube feeds. Following another respiratory exacerbation she was transferred to our hospital to undergo antireflux Nissen fundoplication and G-tube placement. On physical exam, the patient was generally well appearing and breathing comfortably on room air. Breath sounds were equal with some upper airway stridor on auscultation. An IV induction was performed with ketamine and cisatracurium. Laryngoscopy was performed with a C-MAC video laryngoscope with an anatomically normal appearing grade 1 view of the larynx. However, neither a 3.0 cuffed or 2.5 uncuffed endotracheal tube was passable through the subglottis. The 2.5 uncuffed endotracheal tube was held through the vocal cords as distal as possible which allowed successful ventilation while emergency consultation with an ENT surgeon was obtained. Microrigid laryngoscopy and bronchoscopy was performed which revealed a thin subglottic web with only 2-3mm of patent airway. The subglottic web was incised and balloon dilated. Following this, a 3.0 cuffed ETT was easily placed. There were no other significant findings of tracheomalacia or other pathologies. The remainder of the procedure was completed without incident. In this case report we review the incidence, etiology, and management of posterior glottic webs, particularly when these webs present as an unexpectedly difficult intubation.

