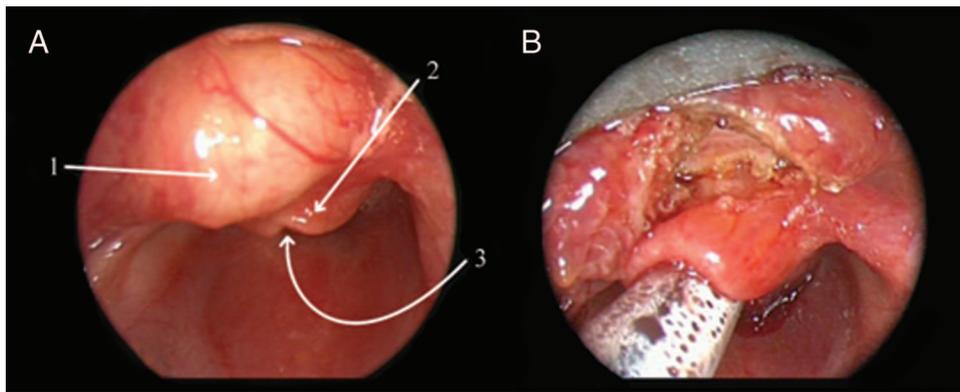


Images in Anesthesiology: Intermittent Airway Obstruction in a Neonate

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A 2-day-old, 40-week gestation, 3.9-kg neonate had feeding intolerance associated with cyanosis, which quickly resolved when the feeding was stopped. The neonate's arterial saturation was normal with restful breathing; crying produced intermittent episodes of arterial desaturation (80–85%). Flexible nasolaryngoscopy performed in the neonatal intensive care unit suggested laryngomalacia.

The neonate was scheduled for supraglottoplasty. After 1 mg/kg propofol was administered to achieve hypnosis and preserve respiration, spontaneous ventilation was maintained *via* mask with sevoflurane in oxygen while flexible and rigid bronchoscopies were performed. A supraglottic cystic mass (fig.) located at the base of the tongue (A1) obscured visualization of the epiglottis (A2) and glottis (A3). Tracheal intubation was easily accomplished with direct laryngoscopy, and marsupialization of this cystic mass definitively relieved obstruction of the supraglottic airway (B). Extubation after completion of the surgery was uneventful.

Lesions at the tongue base and vallecula can occur in all age groups and include hemangiomas, teratomas, dermoid cysts, lymphatic or venous malformations, and thyroglossal duct cysts.¹ Cysts in the vallecula are pathologically benign yet may be “malignant” in clinical presentation. Inspiratory stridor, feeding difficulty, oxygen desaturation, and apnea are the clinical manifestations of hypopharyngeal airway obstruction secondary to the mass effect of the vallecular cyst displacing the epiglottis inferiorly and posteriorly as if to cap the glottis.² A computed tomography scan of the neck may provide a guide to bronchoscopic examination of the upper airway and tracheal intubation.³ Glottic visualization may be difficult during direct laryngoscopy, which may be complicated by cyst rupture, pulmonary aspiration, and edema of or hemorrhage into the cyst. Fiber-optic intubation may be difficult because of distortion of the larynx produced by the supralaryngeal vallecular cyst.³ The management goal for such a patient is to achieve satisfactory depth of anesthesia while preserving spontaneous ventilation for direct laryngoscopy.

References

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