We report the intraoperative management of a rare case of vallecular cyst causing supra-glottis obstruction and respiratory distress in a 4-month-old infant.

**Case Report**

The infant is a 4-month-old 5 kg male born at 39 weeks gestation via C-section at an outside hospital. Apgars unknown but at 4 minutes post birth, the infant was found to be in respiratory distress with saturations around 63%. The infant improved significantly with CPAP and frequent nasopharyngeal suctioning, and was discharged home subsequently. There were no other perinatal abnormalities reported and the infant was otherwise healthy.

Patient presented to the pediatric clinic at day 90 of life with complaints of increasing stridor and poor weight gain. Associated symptoms and signs included ‘noisy’ breathing since birth with increasing stridor and work of breathing, thick oropharyngeal secretions with grunting and gurgling sounds and some ‘short’ periods of apnea. Initial workup in the pediatric ENT clinic included a bronchoscopy showing significant laryngotracheomalacia as well as a sublingual cystic lesion in the vallecula that was compressing the epiglottis. Decision was made by ENT surgeon for resection of cyst under GA. Patient was brought to OR for direct laryngoscopy (DL), bronchoscopy and excision of the vallecular cyst. Following placement of monitors, mask induction was initiated with Sevoflurane. A very easy two person mask ventilation was demonstrated and a peripheral intravenous catheter was placed. DL was attempted by the pediatric ENT surgeons which failed to obtain a view of the glottic opening secondary to the obstruction by the cyst. A 1.5 sized LMA was placed which demonstrated easy oxygenation and ventilation. The patient was intubated with 3.0 ETT via a 2.2 mm fiberoptic bronchoscope through the LMA without any complications. The airway was secured and the surgeons resected the cyst without complications. Following the procedure the infant was extubated subsequently with marked improvement in the work of breathing and complete resolution of symptoms. Follow up visits in the ENT office showed the infant to be doing well with no further interventions necessary.

Vallecular cysts are uncommon yet present as a potentially difficult airway for anesthesiologists. These types of cysts are typically filled with clear fluid and are benign. Vallecular cysts may arise as a result of gland obstruction or an embryological malformation. Patients are typically diagnosed in the first few months of life. Most common presenting symptom is stridor. Symptoms also include difficulty feeding, failure to thrive, cough, and cyanosis. Symptoms may be misdiagnosed as laryngomalacia, however the two conditions may also coexist. Laryngomalacia accompanying a vallecular cyst is associated with younger onset of symptoms, increased symptoms before and after surgery, and longer hospital stays. Cystic fluid may be sent for pathology to confirm diagnosis. Other possible diagnoses include teratomas, thyroglossal duct cyst, and lingual thyroid. Diagnosis is made with direct laryngoscopy and treatment is evacuation of the cyst. These cysts may obstruct the airway so surgeons and anesthesiologists must be prepared to deal with a difficult airway. Equipment to perform emergency tracheostomy must be readily available. Patients do well after removal with good improvement of symptoms.