INTRODUCTION

• Vallecular cyst is an uncommon, but potentially fatal cause upper airway obstruction in infancy.
• Infants may present with inspiratory stridor, apnea, cyanosis, and/or feeding difficulty.
• Surgical excision is the treatment of choice, and when performed in a timely manner bears a good prognosis.

CASE DESCRIPTION

7 week 5.2 kg female infant was admitted to the hospital due to a history of respiratory stridor, perioral cyanosis and episodic apnea with oral feeds. While in the hospital she had several bouts of apnea with subsequent limpness, oxygen desaturation to the mid 40’s and associated bradycardia, which resolved with tactile stimulation. Bedside flexible endoscopy revealed a vallecular cyst with plan for excision in the operating room. Discussion with ENT and anesthesia teams resulted in decision for awake nasotracheal intubation due to a concern for the obstructing vallecular mass.

Patient presented to the operating room with a peripheral IV and no apparent respiratory distress. Each naris was topicalized with one drop of 0.025% oxymetazoline and dilated atrapeutically using a 14 French nasal trumpet. After 5 minutes elapsed, a size 3.0 cuffed nasal RAE tube was passed through the right naris without complication and direct laryngoscopy was performed using a Miller 1 blade and a size 1 Magill forceps. Grade 2 airway view was seen with a well-circumscribed vallecular mass noted to partially obstruct the vocal cords.

Following successful nasotracheal tube placement, anesthesia was maintained with sevoflurane, 7.5mcg intravenous fentanyl and 160mg of rectal acetaminophen. After uneventful excision of the cyst; the nasotracheal tube was removed and the supraglottis, glottis and the trachea were topicalized with 1.5ml of 1% lidocaine. Rigid bronchoscopy demonstrated normal airway anatomy and the patient was then reintubated with a 3.0 oral endotracheal tube to facilitate emergence from anesthesia and was successfully extubated to blow-by oxygen. Patient was discharged home without complication.

CONCLUSION

• Congenital vallecular cyst is a rare, but potentially dangerous cause of upper airway obstruction in infants.
• Anesthetic management of the airway may be challenging, as patients are at risk for sudden complete airway occlusion resulting in hypoventilation, hypoxemia or death.
• Maintaining spontaneous ventilation offers an element of safety during the placement of an endotracheal tube.
• Naso-tracheal intubation should be a considered to facilitate surgical resection and to minimize potential tube dislodgement.

REFERENCES