Giant vallecular cyst: an impending threat for airway collapse

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DESCRIPTION
The vallecular cyst is formed due to an obstruction in the collecting duct of a submucosal gland, thereby causing the accumulation of mucus within it. It is also known as a ductal cyst, mucus-retention cyst. DeSanto et al.1 identified that these vallecular cysts are due to distended ducts and not distended glands as histopathologically, the cells of these cysts are typically squamous or respiratory epithelium and not of acinar cells. As it is a rare entity, the exact incidence is not known. Vallecular cysts can occur in any part of the oropharynx due to the presence of numerous mucus glands within the lining epithelium. In children, vallecular cysts are most commonly found in the base of the tongue and vallecula.2 Vallecular cysts are largely asymptomatic; however, they can cause upper airway obstruction, making the child present with stridor and respiratory distress if it grows large. Surgical excision is the mainstay treatment. Multiple intubation attempts are best avoided as there is a high risk of rupture of the cyst and aspiration of the cyst contents.3 The transoral median glossotomy approach and transhyoid approach, which carry an increased risk of prolonged intubation, need for postoperative tracheotomy and rarely pharyngocutaneous fistula, have been primarily replaced by transoral excision procedures.4

Aspiration of the vallecular cyst to shrink its size followed by intubation has been recorded in the literature.5 6 However, marsupialisation via coblation has been the treatment of choice for vallecular cyst.7

A 7-year-old girl was admitted as a case of difficulty in swallowing. On examination, a smooth cystic lesion was noted in the base of the tongue occupying the oropharyngeal isthmus (figure 1). Clinically, a diagnosis of the vallecular cyst was made. Difficulty in endotracheal intubation was anticipated. As the child was apprehensive for awake fibreoptic intubation, the child was preoxygenated for 3 min and induced with sevoflurane starting from 1%. Mask ventilation was initiated, and the child was on spontaneous breathing. When the child was under, at 3%, the cyst obstructed the glottis completely. The child started desaturating to <90% momentarily. Direct laryngoscopy with

Figure 1 Picture showing vallecular cyst on mouth opening.

Figure 2 Cauterisation of the attachment of the vallecular cyst after aspiration.

Figure 3 Histopathological examination of the excised cyst showing outer lining of squamous epithelium.
Macintosh blade showed it would be impossible to intubate with the cyst unruptured. The cyst was held with a Magill’s forceps, lifted and aspirated. Around 2 mL of clear fluid was aspirated from the cyst, following which it collapsed on itself. Once the cyst was aspirated, the airway opened, and with the child breathing spontaneously, saturation improved to 100% quickly. Endotracheal intubation was successful. Under general anaesthesia, the vallecular cyst was examined using a 0° endoscope, and it was found to be arising from the lingual surface of the epiglottis. The base of the vallecular cyst attached to the lingual surface of the epiglottis was cauterised (figure 2), the sac was removed and sent for histopathological examination. The child was extubated uneventfully. Histopathological examination of the excised material confirmed our diagnosis of the vallecular cyst (figure 3).

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