Vallecular cyst causing a difficult intubation

Editor—Vallecular cysts are a rare cause of difficulty in intubating the trachea. We describe a case of difficult intubation in a patient, after inhalation induction, for examination under anaesthesia of an infected vallecular cyst.

A 31-yr-old male presented with a year-long history of dysphagia, anorexia, and 13 kg weight loss. He had a 3 week history of shortness of breath on exertion and associated dysphonia. There was no evidence of stridor or hoarseness. He was apryexial, haemodynamically stable with oxygen saturation of 98% on room air. His medical history was significant for a 6 yr history of i.v. drug usage and heavy smoking. On examination, there were no palpable masses on his neck or visible abnormalities in his oral cavity. He was Mallampati score 1, and had good mouth opening and neck movement. Flexible fiberoptic nasolaryngoscopy revealed a well-circumscribed pedunculated mass arising from the vallecula.

He was taken to the theatre for examination under anaesthesia, pharyngoscopy, and oesphagoscopy. Inhalation induction was carried out with upward titration of 1–8% sevoflurane in 100% oxygen. Anaesthesia was maintained with bolus doses of propofol, in addition to sevoflurane in 100% oxygen. Anaesthesia was maintained with bolus doses of propofol, in addition to sevoflurane in oxygen via face mask. Spontaneous respiration was maintained. Three attempts at laryngoscopy using Macintosh blade 3, McCoy blade 3, and Miller laryngoscope were all unsuccessful. Oxygen saturations throughout remained stable and the patient was easy to bag-mask ventilate.

Endotracheal intubation was finally obtained by the ENT surgeon using the ENT rigid laryngoscope. Being longer than anaesthetic laryngoscopes, it was possible to pass distal to the cyst, displacing it to one side allowing visualization of the vocal cords. The remainder of the anaesthetic was uneventful. Definitive treatment included aspiration of thick pus followed by excision. IV dexamethasone was administered to limit airway oedema. At the end of the procedure, the patient was extubated uneventfully. Microbiology culture grew *Staphylococcus aureus*. Histological examination revealed that of a benign cyst. He was treated with i.v. antibiotics and discharged home on the fifth postoperative day.

Most laryngeal cysts are asymptomatic. However, all have the potential to present with airway compromise. Non-infected cysts usually present with mild symptoms related to pressure effect on surrounding tissues. Infection of cysts can cause acute epiglottitis or abscess formation and subsequent acute airway obstruction. A review published in 2008 describes an increased incidence of airway obstruction in infected compared with non-infected cysts.1 There are case reports of patients with vallecular cysts proving difficult to intubate.2 3 Several describe complications encountered during intubation attempts: bleeding requiring abandonment of the procedure2 and laryngospasm.2

The presence of the vallecular cyst is often unknown before induction of anaesthesia. In our case, we were aware of the potential of airway difficulty. We considered awake fiberoptic intubation; however, our patient was an unsuitable candidate. He was uncooperative; therefore, high doses of sedation with risk of loss of the airway could be required. In addition to this was the risk of rupturing the cyst, obscuring views of the larnyx, and potential aspiration of cyst contents. By using an inhalation induction with total i.v. anaesthesia maintenance, we were able to maintain spontaneous breathing in our patient enabling us to safely secure the airway without compromise. If an immediate airway became required, a surgical airway would then have been considered.

This case reinforces the need for avoiding repeated intubation attempts which may increase complications, and also reinforces the requirement for an ENT surgeon being immediately available to safely secure the airway in such a setting. As a result, we were able to avoid complications associated with repeated attempts at intubation, airway loss, or cyst rupture causing difficulty visualizing vocal cords and aspiration.

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2 Kamble VA, Lilly RB, Gross JB. Unanticipated difficult intubation as a result of an asymptomatic vallecular cyst. Anaesthesia 1999; 3: 872–3
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Tracheal intubation using an AirWay Scope® in a patient with Halo-Vest Fixation for upper cervical spine injury

Editor—The AirWay Scope® (AWS) (Pentax, Tokyo, Japan) video laryngoscope1 allows for tracheal intubation with less upper cervical spine (C-spine) movement than is required by the Macintosh laryngoscope.2 We report intubation using AWS after induction in a patient with Halo-Vest Fixation (HVF).

A 14-yr-old boy was undergoing cervical anterior and posterior spinal fusion after spinal injury 2 days earlier. His unstable C-spine was stabilized with HVF on the day of injury under local anaesthesia. Awake fiberoptic intubation was initially considered; however, the patient was