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 apyrexial, 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 fibreoptic nasolaryngoscopy revealed a well-circumscribed pedunculated mass arising from the vallecula.

He was taken to the theatre for examination under anaesthesia, pharyngoscopy, and oesophagoscopy. 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 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. A review published in 2001; required by the Macintosh laryngoscope. 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 fibreoptic intubation was initially considered; however, the patient was...
stressed by the HVF and had difficulty cooperating. We therefore planned to intubate the trachea with AWS after the induction of general anaesthesia. After setting up alternative devices to secure the airway, including equipment for percutaneous tracheostomy and transtracheal jet ventilator, general anaesthesia was induced. To evaluate C-spine immobility and navigate the manipulation of the AWS, we fluoroscopically observed intubation with a mobile image intensifier. The time taken to complete intubation was 125 s and oxygen saturation did not decrease below 98%. During intubation, alignment of C-spine was maintained in the HVF (Fig. 1).

HVF is the most rigid, established procedure for preventing neurological deterioration in an unstable cervical spine. However, HVF makes alignment of the oral, pharyngeal, and tracheal axes impossible. Fiberoptic bronchoscopy (FB) is recommended for intubation in non-emergency settings. Additionally, case reports show several devices, such as intubating laryngeal mask airway, combitube, Bullard laryngoscope, and retrograde tracheal intubation, were useful for airway management in patients in an HVF.

We recently reported that AWS reduced C-spine movement during intubation in the patient with in-line stabilization. In that study, however, AWS still required the median cumulative upper C-spine movement of 13.5⁸. Although the alignment of C-spine was kept rigid by HVF in this patient, the shape of AWS allowed for the squeezing of the soft tissue around the glottis to intubate without impact on the alignment of the C-spine.

Manipulation of the AWS is not free from limitation by HVF and it might have resulted in the increased time of intubation (125 s). Adequate oxygenation remains a considerable concern in this method. Another concern is the possibility of aspiration. More than 20 h fasting cannot ensure gastric emptying in this clinical situation. Therefore, care must be taken in extrapolating this case report to other clinical situations. For patients who can accept and cooperate in awake FB, there is no significant benefit in intubation after general anaesthesia. This alternative method could be suitable for patients who refuse or cannot tolerate awake FB. We conclude that the AWS can be an effective option for intubation in patients with HVF.

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**Weight loss and 2,4-dinitrophenol poisoning**

Editor—There are only a few cases in the literature of 2,4-dinitrophenol (DNP) poisoning in adults resulting in death.¹ We describe the first case of multigain failure and widespread rigidity secondary to DNP poisoning 8 h after presentation.

The prevalence of non-prescription weight loss measures is increasing.² The internet is commonly being used as a low cost alternative of acquiring advice and prescriptions. DNP (C₆H₄N₂O₅) first gained popularity for weight loss in the 1930s with studies showing that a daily dose of 300–400 mg for 2 weeks resulted in 36–95% increase in an individual’s basal metabolic rate.³ It was soon taken off the market due to adverse effects including cataracts, liver failure, agranulocytosis, and death. DNP

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**Fig 1** A lateral fluoroscopic view at intubation. The patient’s cervical spine had been kept immobilized by Halo-Vest.

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