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Aspiration pneumonia associated with a giant epiglottic cyst after cardiac surgery

To the Editor:

Epiglottic cysts are found incidentally during induction of general anesthesia and can hamper tracheal intubation.¹ Several methods have been reported to overcome these situations, however, to our knowledge, there has been no report of postoperative respiratory complications in patients with epiglottic cysts. We describe a patient with a giant asymptomatic epiglottic cyst who developed aspiration pneumonia after cardiac surgery.

A 71-yr-old man (height 154 cm, weight 42 kg) was scheduled to undergo coronary artery bypass grafting. During induction of general anesthesia, a giant epiglottic cyst was found (Figure). Though manual ventilation was easy, the cyst had almost obstruct-

ed the larynx and tracheal intubation was difficult. The surgery was carried out uneventfully and he was admitted to the intensive care unit for postoperative management. On postoperative day one (POD1), he was extubated and his respiratory state was stable. On POD2, he was able to drink water and the cough reflex was present. Immediately following the reintroduction of solid food, he developed aspiration pneumonia of the right lower lobe. Mechanical ventilation and administration of antibiotics proved effective and the cyst was removed surgically on POD5 under general anesthesia. The postoperative course after cystectomy was uneventful and oral intake was normal.

There are several factors that increase the risk for aspiration pneumonia after surgery; namely, loss of protective airway reflexes, vomiting, pregnancy, obesity, diminished level of consciousness, anatomic distortion of the airway and a history of cerebrovascular disease.^{2,3} Especially after cardiac surgery, age and duration of intubation are independent predictors of swallowing dysfunction.⁴ In our patient, age, the residual effects of anesthetics, the use of transesophageal echocardiography, duration of intubation and anatomic distortion due to the giant epiglottic cyst are all possible factors explaining aspiration. We cannot tell which factor was predominant. However, the presence of this large epiglottic cyst may have resulted in postoperative epiglottic dysfunction and aspiration of solid food.

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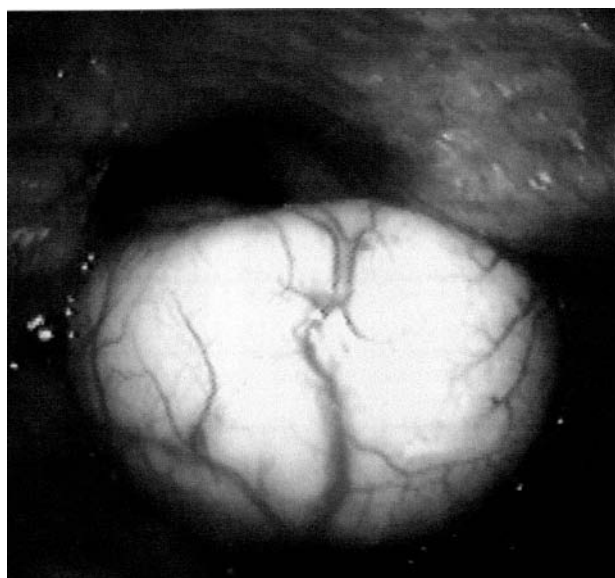


FIGURE A giant epiglottic cyst was found incidentally at laryngoscopy. The larynx was almost obstructed by the cyst.

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Ventilation of a patient after esophageal intubation with a double-lumen tube

To the Editor:

Sometimes, intubation with a double-lumen tube (DLT) is difficult. We present a patient who was ventilated after esophageal intubation with a DLT used like an esophageal-endotracheal combitube (EEC). A 66-yr-old female patient (155 cm, 74 kg, body mass index = 31) was scheduled for thymectomy for grade-I myasthenia gravis. Her thyromental distance was less than 6 cm and difficult intubation was predicted. General anesthesia was induced with 70 mg propofol and 0.1 mg fentanyl, and maintained with 4% sevoflurane. She was intubated without using a muscle relaxant with a 35 Fr-Left-DLT (Sheridan, Tyco, Tokyo, Japan). Her Cormack's laryngoscopic view was grade 3. Although the DLT could not be advanced more

than 21 cm from the patient's incisors, endotracheal intubation was assumed when spontaneous breathing re-appeared rapidly and capnography detected a normal CO₂ waveform. However, the patient could not be ventilated mechanically. Subsequent fibroscopy via the bronchial lumen revealed esophageal intubation. The bronchial lumen compressed the posterior wall of the esophageal inlet, while the tracheal lumen opened just posterior to the arytenoid cartilages (Figure). In this case, the DLT performed as an EEC. Grmec reported that capnography was the most reliable method to confirm esophageal intubation,¹ since the CO₂ waveform generally decreases to zero, even if an initial pulse of swallowed CO₂ is sensed. However, repeated airway evaluations should be performed to prevent a misdiagnosis such as occurred in our case, rather than depending on capnography alone.

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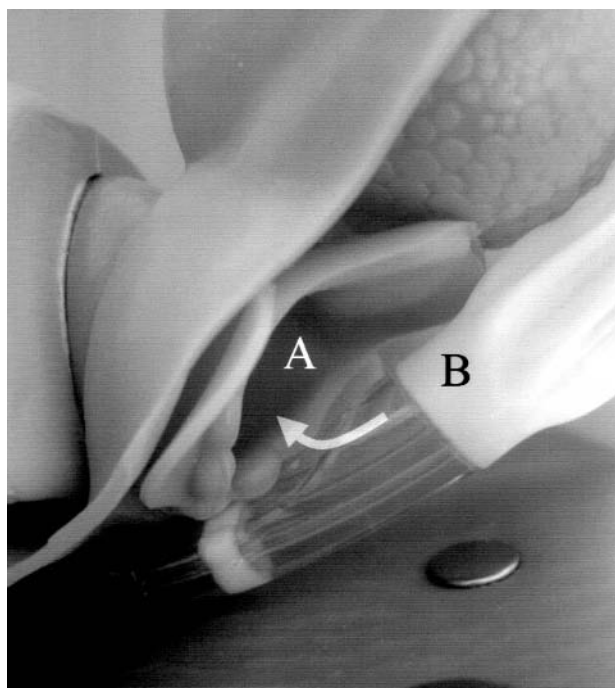


FIGURE Relationship between the vocal cords and the tracheal lumen of a double-lumen tube (DLT). The bronchial lumen is inserted in the esophagus. A, vocal cords; B, tracheal lumen of the DLT.

Management choices for the difficult airway

To the Editor:

We read with great concern the article by Jenkins *et al.* (October 2002).¹ Their survey showed that in "Clinical Scenario number 3 - Laryngeal tumour with stridor for laryngectomy," 90% of anesthesiologists would perform an awake intubation, 45% of which would use fiberoptic bronchoscope (FOB) and 38% a lighted stylet.

This is very dangerous practice and could result in death of the patient. Best anesthetic practice is either 1) gas induction of anesthesia, maintaining spontaneous respiration, and when deep enough using a rigid laryngoscope (our preference is the tubular Lindholm scope as it opens up the posterior pharyngeal space and pushes tumour or edema out of the way). 2) If the patient is deemed to have an extremely compromised airway then an awake surgical tracheostomy is indicated.²

Awake FOB intubation is totally contraindicated in this scenario for the following reasons: