

## Unusual failure of intubation

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*To the editor:* A 53-year-old, 168-cm, 70-kg man underwent emergency bilateral ventricular drainage under local anesthesia because of a right thalamic hemorrhage and acute hydrocephalus. After surgery, his level of consciousness deteriorated and upper airway obstruction became apparent, with a Glasgow Coma Scale score of 5 to 6. An anesthesiologist was called to manage his airway by tracheal intubation. Nasal intubation was tried using a MacIntosh No. 3 blade gently without muscle relaxants. The tongue was swollen. The epiglottis was seen but the vocal cord was not. With a little resistance, a 7.0-mm ID reinforced endotracheal tube with Murphy eye was advanced beneath the epiglottis to a depth of 27 cm at the naris and the cuff was inflated. The airway obstruction was improved and capnography showed end-tidal CO<sub>2</sub> of 30–33 mmHg. However, the capnographic waveform was irregular, but this was thought to be due to irregular spontaneous breathing. Chest auscultation revealed bilateral breath sounds during both spontaneous breathing and a positive pressure breath given by the anesthesia bag. The airway appeared secured from observation of the patient's chest movement and the anesthesia bag (inflation and deflation). Capnography continued to show an end-tidal CO<sub>2</sub> of 28–33 mmHg, although the waveform remained irregular. The patient, who was breathing spontaneously, was transferred to the radiology service for radiographs of the skull as a routine check. The radiographs (Fig. 1) revealed failed intubation, with the tube kinked in the pharynx with its tip toward the head. The trachea was intubated there by a neurosurgeon, and its proper position was verified by a chest radiograph.



**Fig. 1.** Postoperative radiographs of the skull revealed the malposition of the endotracheal tube

We speculate that there was obstruction in the nose and the oral side of the pharynx from the tube, because no leak was noticed during positive pressure ventilation by squeezing the anesthesia bag. The tube was considered to have maintained the airway just as the laryngeal mask airway would do. The tube, however, did not protect the patient from aspiration. Although the reinforced endotracheal tube was selected in case of further emergency surgery, the floppy tube was thought to contribute to this consequence. In addition to the standard methods, a simple examination of the pharynx should be performed to confirm proper intubation, especially when a reinforced tube is used without direct visualization of the vocal cords.

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