

Unexpected Danger: Obstruction of Endotracheal Tube by Tegaderm

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TO THE EDITOR

Iatrogenic airway obstruction by foreign body, clot plugs have been documented recently very well, I am compelled to report an unusual case of a complete airway obstruction by Tegaderm. We decided to share and to write our experience

A healthy ASA physical status class I, three years old 18 kg boy presented for External Ventricular Drainage (EVD) insertion due to the intracranial hemorrhage. After induction of anesthesia 4.5 oral endotracheal tube (ETT) was secured to the boy's chin with plastic tape and Tegaderm dressing. We checked the ETT connections, then the patient was prepped and draped. The flow sensor alarmed low flow 10 minutes later. Tidal volume decreased. To solve the cause of low flow alarm we firstly expected the anesthesia

ventilator, the connections of oxygen intake and the circuit of anesthesia. There was a leak in the system. We disconnected and reconnected the ETT. After reconnection, the ventilation didn't improve. Tidal volume dropped immediately to 0 ml. We removed the surgical drapes to examine the patient. The patient was in cyanosis with no chest rise. We removed the ETT immediately, rapidly intubated again. After ventilating with 100% oxygen, oxygen saturation increased to 99%. We didn't suspect bronchospasm or laryngospasm. The patient was reprepared and surgery proceeded uneventfully. The postoperative period was unremarkable.

What we saw then the tegaderm in the ETT causing the obstruction internally in the distal end of the ETT by migration

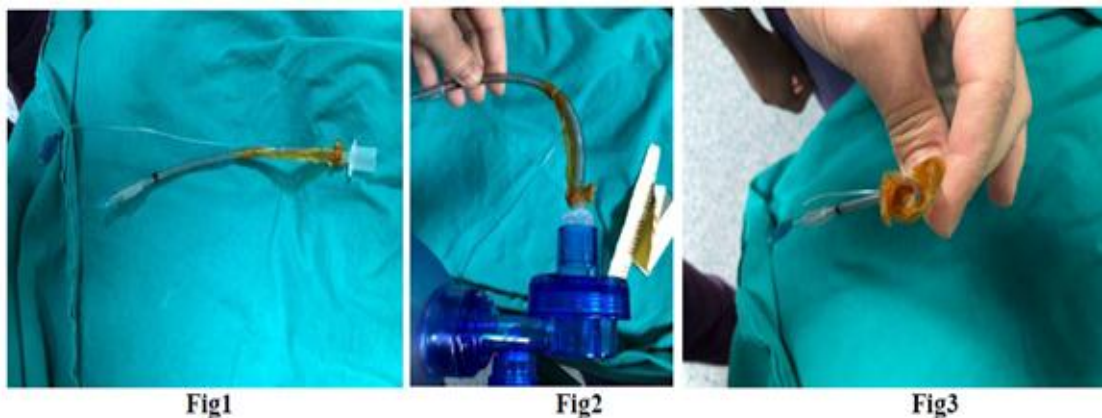


Figure 1, 2, 3: Views of the endotracheal tube

There are several acute management steps to consider when assessing the deterioration of oxygenation for an intubated patient. First tube occlusion must be considered. Occlusion of the endotracheal tube is very serious and life threatening event. Manual ventilation should be

the first, removing of the tube should be the second attempt in case of impossible suction. When it is not possible to remove the obstruction quickly, rapid reintubation must be performed (1,2)

There have been case reports which have been shown various techniques in dealing with blood clot impaction in the ETT. Once obstruction is suspected, nearly all reports indicated a common algorithm for the management of the obstructed ETT. More importantly this rapidly results in life threatening ventilatory problems.

In conclusion we present a patient who became hypoxic severely during the surgery due to the occlusion. We are unaware of any similar case as ours, causing obstruction of the airway. Without any panic we overcame this serious complication which could have a fatal consequence.

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