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Case Report Open Access

Difficult to Ventilate. Unusual Cause of Endotracheal Tube Obstruction

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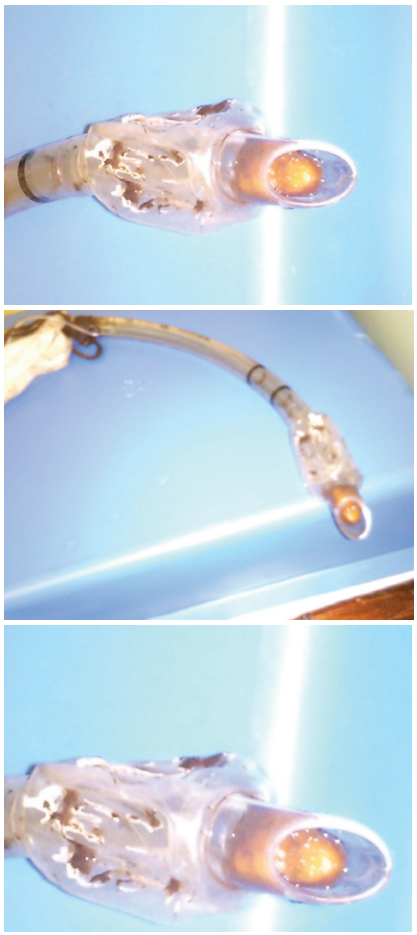
Endotracheal intubation is a well recognized indication for airway control for patients with low GCS and at risk of aspiration. Unfortunately having an endotracheal tube (ETT) in place does not guarantee a patent airway and ETT itself may become a source of airway obstruction [1,2]. ETT obstruction can occur by numerous mechanisms including kinking, tracheobronchial secretions, blood and foreign bodies [1]. We are reporting an ET obstruction with a big bean which patient aspirated and later it caused the Endotracheal tube obstruction.

Case Report

A 52- years old male brought in by ambulance to Accident & Emergency department with history of witnessed collapse at home at 00:24 hrs while he was having his dinner. On examination GCS was 5/15 and Miami J collar was in place. Heart rate was 124 beats per minute and in sinus rhythm Blood pressure was 130/95, SpO^2 89% with 100% O^2 with face mask with bibasel decreased air entry in lungs and in right middle zone. Abdomen was distended & was regurgitating coffee ground coloured fluid. He had background history of known alcohol abuse, liver cirrhosis, depression and smoking. Patient airway was secured with cuffed oral endotracheal tube of size 8.5mm ID with rapid sequence induction and cricoid pressure using midazolam and suxamethonium. His intubation was Cormac and Lehan grade I intubation. During intubation I saw coffee ground fluid around the larynx and also coffee ground fluid coming out from trachea. Large bore intravenous access was secured and mechanical ventilation was started with oxylog ventilator with 100% O^2 and Attracurium used as neuro muscular blocker. Patient was transferred to CT scanner for CT Brain, after the scan during transfer from CT scan table to the patient's trolley peak inspiratory pressures (PIP) went very high(alarm pressure set at 40 mmhg) and ventilator was unable to deliver set tidal volumes. So immediately patient was disconnected from ventilator and tried to manually ventilate with C circuit but was unsuccessful. Patient's saturation started to drop and came down to 75%. Laryngoscopy was performed, ETT was still in place, so as a last resort ETT was taken out, and a big bean was stuck into the bevel of the ETT which was completely obstructing the lumen of ETT. Patient was re-intubated with size 8.0 mmID ETT with difficulty because of soft tissue edema around the glottis. Airway pressure came back to normal. CT brain was inconclusive and patient was transferred to intensive care unit. In ICU triple lumen central line was inserted from right internal jugular vein and arterial line was inserted in right radial artery. Patient was put on Augmentin 1.2 gram three times daily. Patient was initially on high Fio^2 but gradually improved and was extubated on ninth day and was transferred to ward with no cognitive impairment.

Discussion

Causes of ET obstruction include kinking, tracheobronchial secretions, blood, and foreign bodies [1,2]. Obstruction by a foreign body is a rare event [3], various foreign bodies and 'biting down' on the spiral of a reinforced ETT have been reported to cause obstruction. The recommended maneuver of suspected obstruction of ETT includes passing a suction catheter through the tube and performing fiberoptic examination [4]. But in our case suction catheter was the only available option in the CT scanner which was not helpful so the decision to change the ETT was made because of the emergency life threatening situation (unable to ventilate). A well stuck bean was found in the ETT which was also obstructing the



Murphy eye. On re-intubating anatomy it was difficult to intubate due to soft tissue edema and Miami J collar for suspected cervical spine injury. So airway secured with a smaller tube. We conclude that if there is such a situation then the ETT should be replaced promptly for oxygenation and ventilation and ensuring that all the necessary equipments for difficult intubation should be ready to counteract any unanticipated difficulty in previously done easy intubation.

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