

defects⁵ and the possible association between Poland anomaly and muscle weakness⁶ yield further evidence supporting the contraindication of succinylcholine in these cases.

Positive pressure ventilation might have been the appropriate way to avoid respiratory complications in this patient, as proposed by the authors, but achieving this by giving succinylcholine and halothane is an unsuitable barter exchanging one hazard with another.

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Missed cuff herniation despite fibreoptic bronchoscopy

To the Editor:

Cuff herniation is a rare and often difficult to diagnose cause of airway obstruction. We report a case of endotracheal tube obstruction due to cuff herniation mistakenly attributed to secretions.

A 20-yr-old man underwent a 12 hr operation for excision of an osteogenic sarcoma. Integrity of the cuff was assessed preoperatively and no contact occurred between the cuff and teeth during intubation. The patient was placed in the lateral position and anesthesia was maintained with isoflurane/N₂O. Airway pressure increased from 16 to 35 cm H₂O. A suction catheter was passed beyond the tip of the endotracheal tube and secretions were aspirated. Ballotment of the pilot balloon indicated that the

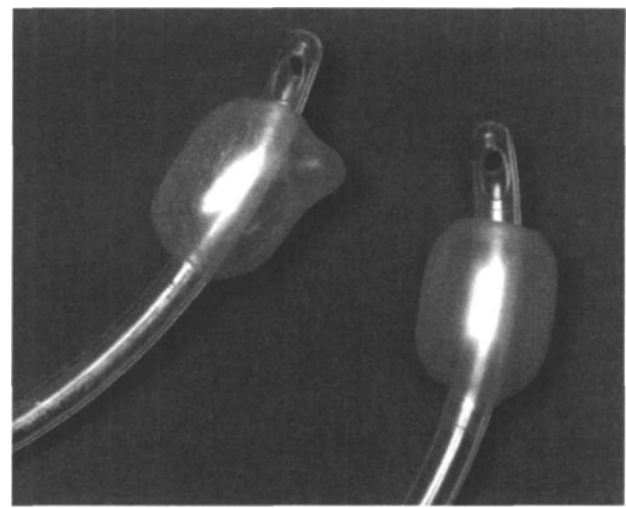


FIGURE Endotracheal tube, size 8.0 mm internal diameter (Mallinckrodt Hi-Lo, St. Louis, MO)

cuff pressure was not excessively high. Subsequent fibreoptic bronchoscopy revealed a collection of "mucous" on the distal wall of the tube which were aspirated with transient improvement in airway pressure. Postoperatively, an aneurysm of the cuff was evident. In retrospect, the "mucous" was likely the cuff herniating through the Murphy eye. The distended cuff might also have caused the tube to abut against the tracheal wall, partially occluding the tip.¹⁻⁴

Cuff herniation is rare: we identified 17 cases from the Medical Devices Reports of the United States FDA (1984-1997), eight associated with airway obstruction. The algorithm for the management of high airway pressure includes the passage of a catheter down the tube. If the tube is obstructed, the cuff should be deflated and patency reassessed. The tube may be replaced or repositioned but retained for later inspection. Deflation of the cuff will alleviate the obstruction and alert the clinician to diagnosis.

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Non-dependent axillary artery compression during needlescopic thoracic sympathectomy

A fit young man with palmar hyperhidrosis underwent bilateral needlescopic thoracic sympathectomy. Initially, in the right lateral position, a temperature probe was taped to the left (non-dependent) hand to detect the temperature rise after left electrocautery sympathectomy. The left forearm was placed on a U support. A roll was placed under the right axilla and a pulse oximeter probe on the right thumb.

To allow introduction of the needlescope in the 3rd intercostal space in the axilla, the left shoulder was flexed to 120°. However, after the T2 and T3 ganglions were ablated, the hand temperature did not increase, even after 10 min. On examination, the left brachial and radial pulses were absent, while the right arm circulation was normal. The pulse oximeter probe was repositioned on the left thumb but no trace was obtainable. Left shoulder flexion was reduced and, immediately, the pulses returned and the hand temperature increased by 1°C.

When right sympathectomy was performed, the pulse oximeter was placed on the operative, nondependent, right hand. Axillary artery compression was detected early and corrected by reducing shoulder flexion.

Usually, precautions are taken to prevent compression of the dependent axillary artery and brachial plexus in the lateral position. However, when the non-dependent shoulder is flexed beyond 90° in high thoracic sympathectomy, the axillary artery may also be compressed. This prevents the increase in hand temperature following sympathectomy that is necessary to assess surgical success. We suggest that the circulation be monitored simultaneously with pulse oximeters in both hands during such surgery.

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