

4. Khan ZP, Ferguson CN, Jones RM. α_2 and imidazoline receptor agonists. Their pharmacology and therapeutic role. *Anaesthesia* 1999;54:146–65.

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Fixation of an Oral Tracheal Tube to the Maxilla in Maxillofacial Surgery

To the Editor:

Securing the orotracheal tube is a challenge in maxillofacial surgery. Blood, saliva, and disinfectant solutions interfere with tape adhesion (1). Surgeons frequently reposition the head, further jeopardizing the security of the orotracheal tube. Several methods of securing oral endotracheal tubes have been described: anchoring the endotracheal tube with circummandibular wire (2) or a standard dental arch bar (3), affixing wire between the endotracheal tube and the cervix of a stable tooth (4), using a dental rubber dam clamp (5) or screw fixation to the maxilla (6).

We report another method of affixing an oral tracheal tube in a case of midfacial fracture.

A 25-yr-old man sustained maxillofacial injury from a motor vehicle accident. Clinical and radiological examination revealed bilateral Lefort Type 2 fracture of the midface, naso-orbito-ethmoidal complex fracture, and fracture of the mandible at the parasymphysis. The patient was scheduled to undergo open reduction and internal fixation of his maxilla, mandible with nasal bone manipulation and stabilization. Airway examination showed an adequate mouth opening with avulsed maxillary central incisors and right lateral incisor.

After we induced general anesthesia and neuromuscular blockade, we intubated the trachea with a 38F flexometallic tube. We drilled a hole above the maxillary central incisors' socket in the thick alveolar bone and threaded a 6-mm intermaxillary fixation screw into the hole. We secured the endotracheal tube to the screw using 26-gauge dental wire (Fig. 1). This permitted proper alignment of the teeth, and completion of the surgery without risk of extubation. At



Figure 1. Endotracheal tube secured to the screw drilled in maxillary central incisors' socket.

the end of the procedure, we reversed the neuromuscular blockade, extubated the trachea, and removed the maxillary screw, without any complication.

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REFERENCES

1. Honig JF, Merten HA, Braun U. Intraoral dental fixation of an endotracheal tube using a cofferdam clamp. *Anaesthesist* 1990;39:422–3.
2. Wingate G, Stevenson GW, Pensler JM. Rigid endotracheal tube stabilization during craniomaxillofacial surgery. *Ann Plast Surg* 1989;23:459–60.
3. Perrotta VJ, Stern JD, Lo AK, Mitra A. Arch bar stabilization of endotracheal tubes in children with facial burns. *J Burn Care Rehabil* 1995;16:437–9.
4. Chuong R. Intraoral stabilization of the endotracheal tube. *Plast Reconstr Surg* 1983;71:286.
5. Edelman G, Chan DN. Intraoral stabilization of the endotracheal tube using a dental rubber-dam clamp. *Plast Reconstr Surg* 1982;70:96–7.
6. Davis C. Endotracheal tube fixation to the maxilla in patients with facial burns. *Plast Reconstr Surg* 2004;113:982–5.

- DOI: 10.1213/01.ane.0000246297.49482.72

Recovering a Detached Univent Endobronchial Balloon

To the Editor:

The Univent[®] endotracheal tube from Fuji Systems Corporation, Tokyo, Japan has a movable endobronchial blocker used for one-lung ventilation. We report a potentially

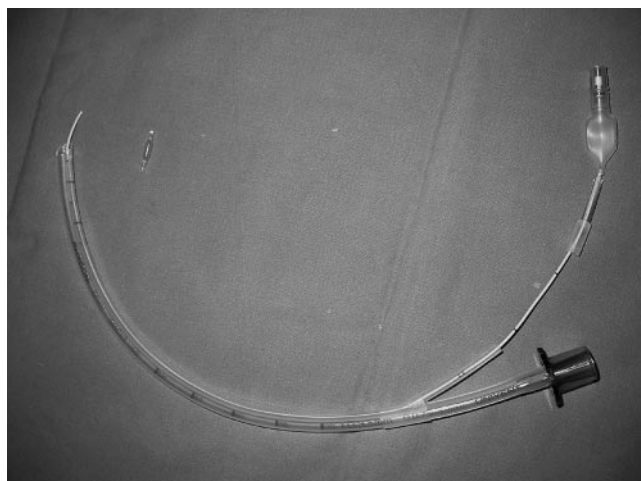


Figure 1. The removed Univent tube. The detached distal balloon lies within the circle.

serious complication with the Univent endobronchial tube that occurred during thoracoscopic surgery in a pediatric patient.

A 3-yr-old, 14.5-kg, 84-cm girl underwent right-sided thoracoscopy. After inducing general anesthesia, we successfully isolated the right lung, using a size 3.5 Univent endobronchial tube with an inflated balloon. We positioned the patient, inflated the blocker, and reinserted the bronchoscope to confirm position. We found that the endobronchial balloon was completely detached, lying in the right mainstem bronchus. We were unable to remove the balloon with the suction port on the flexible bronchoscope, but eventually removed it using a suction catheter attached to the proximal end of the Univent endotracheal tube after the advancement of the tube nearer to the balloon (Fig. 1). We re-intubated the trachea with another size 3.5 Univent tube, and the rest of operation was uneventful.

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Stuck Tracheostomy Button: An Unusual Complication

To the Editor:

Tracheostomy is a well-established procedure in patients with respiratory insufficiency who need mechanical ventilation. When patients recover sufficiently from respiratory failure, and mechanical ventilation is no longer required, predicting which patients will tolerate abrupt airway decannulation is difficult (1). In such patients, we use a tracheal button to keep the stoma open for immediate access.

A 63-year-old man underwent open prostatectomy under epidural anesthesia. After two episodes of severe respiratory insufficiency in the 2 wk after surgery, a percutaneous tracheostomy was performed.

Eleven days after the tracheostomy, the patient was weaned from mechanical ventilation, tracheally extubated, and a 10 mm diameter, 40 mm length tracheal button was inserted to maintain a patent tracheostomy lumen. He could breathe easily and cough adequately. Two days later he was discharged from the hospital.

Seventy-five days after the button insertion, the patient returned for a prostate follow-up examination. He was breathing well, speaking well, and we elected to remove the tracheal button. To our dismay, it was stuck. Flexible bronchoscopy under topical anesthesia revealed a 3 × 6 mm white hemorrhagic tumor arising from the right anterior part of the trachea (Fig. 1a).

The tumor was irradiated with a high-power laser (Argon 1000

COAG, Hamburg, Germany). Specimens were obtained with forceps and sent for histology. The tumor was destroyed, and all its remnants were removed (Fig 1b). The button was then easily removed. The tumor histology showed respiratory mucosa. The patient was subsequently seen monthly, and presented with granulomata arising at the same site in the trachea 3, 4, and 8 mo after tumor destruction, which were again removed using a laser (Figs. 2a and b).

It is difficult to teach patients and their care-givers proper tracheal button care. Buttons should, therefore, be removed as soon as possible. This report does not preclude using a tracheal button to keep the tracheostomy stoma patent during weaning from tracheostomy. It is a useful and safe technique. However, one must remove buttons once they are no

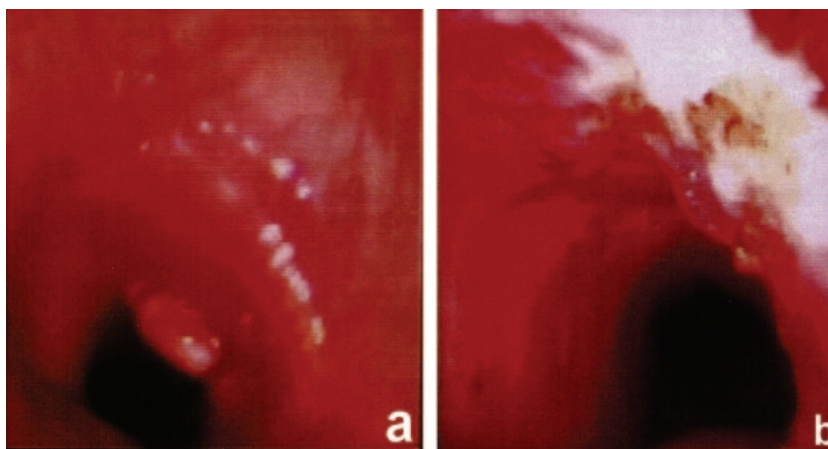


Figure 1. Fiberoptic bronchoscopic view of the tracheal lumen before (a) and after (b) laser therapy.

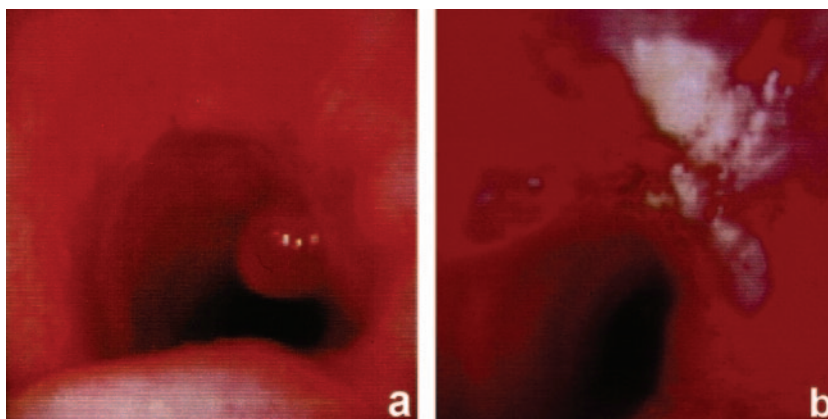


Figure 2. A granuloma of the trachea found 3 mo after the initial therapy with a laser (a) and removed with the same technique (b).