Successful awake nasal fiberoptic intubation in a patient with restricted mouth opening due to a large tongue flap

Sir,

Tongue flaps are used to close recurrent palatal fistulas after cleft palate repair.\(^{[1]}\) If the tongue flap causes restricted mouth opening, securing the airway before surgery to release the tongue flap can be challenging.\(^{[2]}\) We report airway management in a patient with markedly restricted mouth opening due to a tongue flap who was booked for release of the flap.

A 22-year-old female patient, American Society of Anesthesiologists Physical Status 1, was scheduled for release of tongue flap. Airway examination revealed severely restricted mouth opening [Figure 1], thus awake nasotracheal fiber-optic bronchoscope (FOB) intubation was planned. She gave informed consent. Twenty minutes preoperatively, glycopyrrolate 0.2 mg intravenously (IV) was administered. In the operating room, routine noninvasive monitors were applied, and 100% oxygen was administered via face mask. IV dexametomidine 0.5 mcg/kg slow bolus, remifentanil IV infusion (0.05-0.25 mcg/kg/min and a total of 2 mg midazolam IV were given for conscious sedation. Xylocaine 0.1% nasal drops was instilled into both nostrils for vasoconstriction. Topical airway anesthesia was achieved with 4 ml of nebulized 4% lidocaine, 2 puffs of 10% lidocaine into each nostril and spray-as-you-go topical anesthesia with 2% lidocaine. Oxygen at 4 L/min was administered through a nasopharyngeal airway in the right nostril. With the patient sedated, the tip of a well lubricated 5 mm FOB was inserted into the left nostril and a gentle nasendoscopy was performed to define the anatomy. The FOB was then gently advanced in the airspace of the left inferior nasal meatus into the nas/o/oropharynx and 2 ml of 2% lignocaine was sprayed through the FOB onto the glottis. The tip of the FOB was then advanced through the laryngeal opening into the trachea to just above the carina. Keeping the FOB steady, well lubricated 6.0 ‘blue-line’ nasotracheal tube was gently railroaded over the FOB into the trachea and its correct placement confirmed by the FOB and capnography. General anesthesia was then induced with IV propofol and maintained with sevoflurane in oxygen. The intraoperative course was uneventful and at the end of the operation, the patient was extubated awake uneventfully.

Tongue flaps are widely used for closing residual fistulae of the palate.\(^{[1]}\) However, securing the airway before surgery to release the tongue flap can be challenging.\(^{[2]}\) Although tongue flaps have been successfully divided under local anesthesia and IV sedation, this requires patient cooperation, and bleeding and aspiration into an unsecured airway may occur.\(^{[3]}\) Sahoo et al.\(^{[3]}\) described the use of right molar approach with a straight Miller no. 3 blade to achieve oro tracheal intubation under general anesthesia in a patient for tongue flap release. However, they and Elpe et al.\(^{[4]}\) concluded that orotracheal fiberoptic intubation is the preferred method for securing the airway because it reduces the risk of trauma to the flap and bleeding into the airway. Although it is advisable to avoid nasal intubation as the palatal flap may be damaged,\(^{[5]}\) in our patient we judged that orotracheal fiberoptic intubation would be difficult and may disrupt or damage the flap.

In conclusion, tracheal intubation in patients with restricted mouth opening with a tongue flap is challenging for the anesthesiologist. Although orotracheal intubation is preferred in patients with recent palatoplasty,\(^{[4]}\) with markedly restricted mouth opening due to a tongue flap, awake nasotracheal fiberoptic intubation may be necessary.

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REFERENCES

1. Posnick JC, Getz SB Jr. Surgical closure of end-stage palatal fistulas using anteriorly-based dorsal tongue flaps. J Oral Maxillofac Surg 1987;45:907-12.
2. Hochberg J, Naidu R, Saunders DE. Anesthesia technique for serving the pedicle of a tongue flap in the presence of a pharyngeal flap. Plast Reconstr Surg 1978;62:905-6.
3. Sahoo TK, Ambardekar M, Patel RD, Pandya SH. Airway management in a case of tongue flap division surgery: A case report. Indian J Anaesth 2009;53:75-8.
4. Eipe N, Pillai AD, Choudhrie A, Choudhrie R. The tongue flap: An iatrogenic difficult airway? Anesth Analg 2006;102:971-3.
5. Solan KJ. Nasal intubation and previous cleft palate repair. Anesthesia 2004;59:923-4.