Difficult airway rescued by a gamjee

Sir,

Difficult airway has forever posed a challenge to the anesthesiologists. By definition, it is the difficulty posed to either the bag mask ventilation or intubation or both. We present a case after a written informed parental consent in which a seemingly difficult airway was made relatively easy by the use of an alternative device (gamjee pads).

A 10-year-old, 25 kg boy presented to the operating room with maxillofacial injury minutes after road traffic accident posted for faciomaxillary repair. On examination, his blood pressure (BP) was 90/60 mm, heart rate was 129/min and oxygen saturation (SpO2) was 95% on room air, Glasgow Coma scale E4V5M6. Local examination of the wound revealed 5 cm × 3 cm laceration on the forehead extending up to the left side of the scalp; the cheek was avulsed from the corner of the right ala nasi, including the right sided angle of the mouth to the middle of the right cheek. The lacerated tissue was edematous, friable and actively bleeding. Inside the oral cavity, the right ramus of the mandible was exposed and teeth were missing on the right maxilla and right half of mandible. The right upper incisor was loose. The systemic examination was within normal limits. Patient had a 20 G intravenous access in situ. The parents gave a history of oral intake (chapatti) 8 h back. He was scheduled for repair of the faciomaxillary wound on an emergent basis.

We anticipated the following problems: Potential aspiration of blood; Poor candidate for awake intubation; Difficult Bag and mask ventilation; Difficult Laryngoscopy (loose incisor).

The difficult airway cart was kept ready and consent for tracheostomy taken. With the patient in trendelenburg position, we preoxygenated him with 100% oxygen. We planned to follow the modified rapid sequence intubation. Injection Fentanyl thirty micrograms IV and injection midazolam one milligram IV were given as premedication. General anesthesia was induced with titrated doses of injection propofol sixty milligram along with sevoflurane inhalation, injection fentanyl and O2. The spontaneous respiration, however, was maintained. After giving Sellick’s maneuver, a Guedel’s oropharyngeal airway of appropriate size was placed in the mouth and the cheek gap was filled with two equal sized gamjees [Figure 1]. An appropriate sized mask was chosen and positive pressure was given and a fresh gas flow of at least 6 L was maintained. Patient could be ventilated with a leak of only 250 ml. After protecting the loose incisor with another gamjee, laryngoscopy was performed with a left molar approach (by inserting the right sided blade from the left corner of the mouth, directing the tip of the blade posteromedially, such that the view was provided by the flange, the lingual surface of the blade and the tongue bulge on the right) for intubation and suction of the oropharynx was also performed under the guidance. A 6.0 mm cuffed endotracheal tube was inserted and secured on the left angle of the mouth. Following this, the cricoid pressure was released and orogastric tube sized 10 French.

![Figure 1: The defect sealed by a gamjee roll and an oropharyngeal airway placed in situ](image-url)
The intraoperative course was uneventful. After the surgery was completed, the patient was extubated after completely regaining consciousness. At the end of the surgery, the BP was 94/62, PR was 98/min and SpO$_2$ was 97% on room air. There was some facial edema only minimal bleeding was seen. An intraoral pack was left in the mouth by the surgeons for any potential bleeding. Post-operative course was uneventful.

Facial injuries have traditionally been a remonstrance for the anesthetists. Several techniques such as laryngeal mask airway placement, awake fiber optic intubation, tracheostomy and combitube placements have been advocated,[2] but simple aids to mask ventilation have been underemphasized.

With an appropriate sized mask, considering that there would be a considerable air leak, we kept the fresh gas flows at 6 L/min. We sealed the wound in both the cases with a gamjee and also placed an appropriately sized oropharyngeal airway in place. On giving positive pressure ventilation, the chest rise was adequate and the SpO$_2$ was maintained at 100%. The leak on providing positive pressure in the first case was 250 ml after sealing the facial defect with a gamjee. Thus, the air was directed into the lungs with the help of an airway and the partially sealed facial defect simply acted as another outlet valve. Hence, the patient could be adequately ventilated.

We opted for a left sided molar approach. The left molar approach has been shown to improve the laryngoscopic view in difficult laryngoscopy situations.[3,4]

To conclude, a simple maneuver like placing a gamjee to seal the wound of a faciomaxillary injury improves the mask ventilation during the induction of anesthesia. Thus, a gamjee is suggested as an aid in the airway management of such cases.

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