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Cannot ventilate, difficult to intubate

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EDITOR:
We read with interest the letter by Slater and Bhatia [1] and would like to congratulate them on their successful management. We agree that the safest approach for their patient would have been an awake fibreoptic intubation. However, we would like to make a few comments.

From the history and picture, it is not clear whether the patient had a prosthesis fitted into the left orbital cavity. If so it could have deceived the airway assessment at preoperative visit. Difficult mask ventilation is, however, still appreciable as it appears to be impossible to achieve a seal with the face mask. In addition to this, a history of radiotherapy associated with limited mouth opening are ominous signs. Although the patient has had an anaesthetic for grommet insertion, it is possible that a spontaneously ventilating technique with a laryngeal mask airway (LMA) was used. If that was the case, the airway remains unchallenged after the radiotherapy following the initial craniofacial resection. We therefore believe that an awake fibreoptic intubation would have been a safer choice of securing the airway in the first place.

Once the situation of inability to ventilate the patient with a face mask was rescued by the LMA, the difficulty with intubation could have been dealt with one of the two options. Firstly, the trachea could have been blindly intubated via the size 5 LMA. Blind tracheal intubation via the laryngeal mask has been reported [2] and it is recognized as one of the alternative approaches for tracheal intubation in the ASA difficult airway management algorithm [3]. However, the Difficult Airway Society guidelines draw attention to the fact that the classic LMA is not designed for this purpose and does not recommend blind intubation via the classic LMA. The other option is fibreoptic-assisted intubation through the LMA, which may have a higher chance of success [4]. Secondly, an intubating laryngeal mask airway (ILMA) could have been used. Intubation could then have been blind via the ILMA or under direct vision using the fibreoptic scope. This technique has been used in patients in whom tracheal intubation using traditional methods had failed and also when other known or anticipated intubation difficulties were expected. Using an Aintree catheter with assisted fibreoptic intubation via these supraglottic devices is also reported and well recognized [5–7]. By adopting any of these techniques the oxygenation would have been uninterrupted via a dedicated patent airway while allowing tracheal intubation. It would then have been possible to avoid the nasal route.

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Reply

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EDITOR:

The intention of reporting this case was to warn anaesthetists of the potential difficulties with airway management where the orbital floor has been removed, and therefore stimulate debate. We are pleased that Drs Chethan and Rassam and also Dr Massimiliano and colleagues have entered this debate.

The patient did not initially have a prosthesis, simply a large dressing over the exenterated area. Concerning the preoperative evaluation, clearly in this case the ideal assessment would have been to carefully insert a fibreoptic scope under local anaesthesia into the orbital defect. It would then have been clear that the defect leads directly to the larynx and therefore that positive pressure ventilation via a facemask would not have been possible. Unfortunately this was not a practical option on the ophthalmic ward and, because of lack of accurate surgical information and a recent general anaesthetic in another hospital apparently without incident, was not considered. Limitation of mouth opening is a concern for the anaesthetist; however, it is not our practice to conduct an awake intubation unless the limitation is extreme. We would normally plan to use a McCoy laryngoscope with a bougie or consider the use of the Bullard laryngoscope, which can be used down to a mouth opening of 6 mm [1]. Awake fibreoptic intubation would be available but held in reserve.

It is often the case, and it was so for this gentleman, that such patients return for further surgery. As it happens, between submission of the letter and publication, further general anaesthesia was required on two occasions. As Chethan and Rassam suggested, we placed an intubating laryngeal mask (size 5), and ventilated through the mask following the induction of anaesthesia. Although placement and ventilation was straightforward, successful intubation through the intubating laryngeal mask airway (ILMA) proved impossible both without and with fibreoptic assistance. This was abandoned and nasotracheal fibreoptic intubation was again successful. In retrospect, the difficulty with the ILMA probably related to the patient's airway anatomy, in that he is tall with a long neck. Thus the ILMA, although adequately positioned for ventilation, was not positioned optimally for successful endotracheal intubation. Using the Aintree catheter with the classic LMA would almost certainly have failed for the same reason. A subsequent successful general anaesthetic was achieved with an awake fibreoptic intubation with the aid of a low-dose remifentanil infusion. Total intravenous anaesthesia with infusions of propofol and remifentanil was used for maintenance of anaesthesia in each case. The major advantage of this technique was that further doses of muscle relaxants were not required, thus ensuring complete recovery from neuromuscular blockade after several hours of surgery, and once both anaesthetic agents had worn off, the patient was fully co-operative for controlled extubation without the risk of residual anaesthesia or paralysis.

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