

LETTER TO THE EDITOR

Non-conventional emergency airway management

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INTRODUCTION

Anesthesiologists often encounter unexpected situations that may result in fatal consequences if not managed promptly and prudently. Management of a difficult airway is a primary consideration for any anesthesiologist. Even in the most experienced hands, an emergency situation may arise because of either limited time or limited resources. Here we present a case report in which a difficult airway was managed with non-conventional equipment.

CASE REPORT

A 67 year-old male presented to our hospital with severe respiratory obstruction and distress. The patient was suffering from carcinoma of the tongue and buccal mucosa and was undergoing radiotherapy. His maximal mouth opening was approximately 3.5 cm. We first attempted to ventilate the patient with a laryngeal mask airway (LMA), but could not due to an ill-fitted LMA. Next, and with difficulty, we managed to secure his airway using an endotracheal tube but noticed significant air-leak through the endotracheal tube cuff after a few minutes of ventilation with an Ambubag. As the patient continued to have persistent respiratory distress with signs of ineffective ventilation, we chose to change the endotracheal tube with a tube exchanger. During the attempted procedure, we were unable to advance the alternate tube into the trachea, possibly due to distorted anatomy secondary to radiotherapy. After further unsuccessful attempts at intubation and increasing respiratory distress of the patient, we attempted to ventilate the patient through the tube exchanger without much success, mainly due to the lack of an adaptor that fit the tube exchanger. At that point, we made an adaptor using a 2 ml syringe, a universal endotracheal tube connector (7mm internal diameter) and the Luer connector of a Ryle's tube (Figure 1). We connected the new adaptor to a pediatric Ambubag (Figure 2) and continued trans-tracheal ventilation. After adequately oxygenating the patient, we secured the patient's airway with a surgical tracheostomy.

DISCUSSION

Supraglottic pathology can make proper positioning of an LMA difficult or impossible.¹ In addition, post-radiotherapy patients often have distorted airway anatomies, which may cause difficulty in endotracheal intubation and problems when ventilating through supraglottic devices. LMA insertion and



Figure 1 - Adaptor for trans-tracheal ventilation.

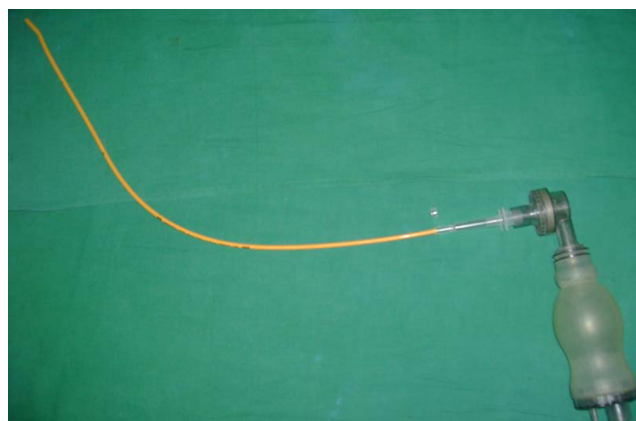


Figure 2 - Trans-tracheal ventilation assembly.

proper positioning is especially difficult in post-cervical radiotherapy patients.^{2,3} Hollow tube exchangers enable physicians to oxygenate patients by insufflation or jet ventilation⁴. At times, ventilation through a hollow tube exchanger can be life-saving until a secure airway is established. In situations in which a properly fitting adaptor for oxygenation through the tube exchanger is not available, the adaptor described in this report can be easily prepared and life-saving.

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