

CASE REPORT

Intubating LMA as an adjunct for emergency intra-operative airway control

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ABSTRACT

Intubating laryngeal mask airway (ILMA) has been shown as a useful airway management device in various situations such as prehospital settings and difficult intubations. The option to intubate without the use of a laryngoscope is an advantage when laryngoscopy is difficult. This report describes an instance where the use of ILMA helped achieve successful intubation intraoperatively when there was loss of airway control.

Key words: Intubation, Endotracheal; Laryngeal Mask Airway; Airway Control; Management, Airway; Complication, Intraoperative.

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INTRODUCTION

The intubating laryngeal mask airway ((ILMA) (Intavent Orthofix, UK)) is an airway device designed to facilitate blind intubation.¹ The principle advantages over the standard laryngeal mask airway are that it can be inserted with the head and neck in a neutral position and that it also avoids the need for introducing fingers into the oral cavity. The option to intubate without the use of a laryngoscope is an advantage when laryngoscopy is difficult. This report highlights one more clinical scenario where ILMA aided successful intubation. There have been no similar reports in the literature.

CASE REPORT

An 82 year old 65 kg male was scheduled for vitrectomy and retinal detachment repair under general anesthesia. He had hypertension and atrial fibrillation. Mouth opening was 4 cm. Anesthesia was induced with inj. propofol 1 mg/kg and inj. remifentanyl 0.75 µg/kg intravenously over 45 seconds. A size 4 flexible laryngeal mask airway (FLMA) (Intavent Orthofix, UK) was inserted after intravenous inj. atracurium 25 mg IV. Bilateral air entry was confirmed with no audible air leak. Anesthesia

was maintained with oxygen, air, isoflurane and remifentanyl infusion 0.12 µg/kg/min on controlled ventilation. About an hour into the surgery, the expired tidal volume decreased to 100 ml and it was associated with an audible air leak from the mouth. Remifentanyl infusion was not blocked or leaking. Fresh gas was changed to 100% oxygen and both isoflurane and remifentanyl were continued. Patient had no spontaneous ventilatory efforts. Attempts to reposition the FLMA were unsuccessful with continuing gas leak. It was felt that intubation was the safest option. The presence of the drapes and an open eye meant that it was desirable to minimise disrupting the surgical field, so we planned to attempt intubation using an ILMA and keep the conventional intubation as a back up.

The FLMA was removed and a size 4 ILMA introduced into the mouth from the side under the drapes. A size 7.5 mm reinforced ILMA tracheal tube was introduced through the ILMA and intubation achieved in the first attempt. After confirming correct placement, the ILMA was removed and tracheal tube fixed. The surgery then proceeded uneventfully. The patient was hemodynamically stable and adequate oxygen saturation was maintained throughout.

DISCUSSION

Intraoperative intubation is usually not difficult if the surgery does not involve head and neck areas. In procedures involving head and neck, access to the airway is limited. If movement of the head is anticipated, it is safer to intubate the patient. Laryngeal mask airway is increasingly being used for ophthalmic procedures due to several advantages such as stable haemodynamics, decreased incidence of coughing and less increase in intraocular pressure.² FLMA provides the added advantage of better operating field for surgeon when compared to rigid devices. Once satisfactory airway control with FLMA is established, air leak midway through surgery is a rare occurrence. In theory, this could happen if patient's head is moved by the surgeon, but in practice, these devices tolerate some degree of head movement.³

Tracheal intubation using conventional laryngoscopy for intraoperative intubation in facial surgery will be associated with significant disruption to the surgical field with risk of operative field contamination, damage to operative area and need for re-draping etc. Laryngoscopy is likely to be chal-

lenging due to space restrictions. ILMA has been used for airway management in settings of difficult laryngoscopy including facial trauma, neck immobilisation, lateral decubitus position, intubation in a helicopter and intubation while wearing protective hood.^{1,4} Insertion of ILMA does not require any special positioning of the head and neck. Hence, it is suited for intraoperative intubation. One other option is intubation over a fiberoptic laryngoscope introduced through the ILMA. This will aid in situations if blind intubation attempts with ILMA fail. Videolaryngoscopes have been used successfully for awake intubation in pregnant patients having cesarean section under regional anesthesia, who experienced severe postpartum haemorrhage with a need to conversion to general anesthesia.⁵ Videolaryngoscope guided intubation is another potential option for intraoperative airway control.

This report highlights another use of ILMA. It can facilitate easy intubation intraoperatively without the need for laryngoscopy and disruption of the surgical field, especially in procedures involving the head and neck when access is restricted.

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