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Mini Review

Intubation Through Retromolar Space: An Analytical Overview

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Abstract

Retromolar intubation is the process of intubating through the retromolar space in patients undergoing surgery in panfacial trauma. The article here describes the assessment of patient, the technique of performing it, the advantages and disadvantages associated with it.

Keywords: *Retromolar Space; Intubation; Panfacial Trauma*

Introduction

Retromolar space or retromolar gap is a space at the rear of the mandible between the back of the last molar and the anterior edge of the ascending ramus. Retromolar Intubation is the process of intubating through this retromolar space. It is a non invasive technique useful in patients undergoing surgery for panfacial trauma. The use of this technique helps in avoiding both submento tracheal intubation and tracheostomy in patients with facial trauma where nasotracheal intubation is not possible. Orotracheal intubation is also not feasible when intraopertive intermaxilliany fixation is planned for restoration of dental occlusion [1]. Nasotracheal intubation is not possible in fracture of the base of skull or fracture of the naso-orbital- ethmoid complex [2]. Though tracheostomy provides a secure airway and nil surgical interference but has its own adverse effects like subglottic stenosis, injury to lingual nerve or oesophagus causing speech and swallowing difficulties [3]. Whereas submental intubation avoids the need for tracheostomy but it then leads to orocutaneous fistula, injury to sublingual/submandibular gland, hypertrophic scarring and infection [4]. In such patients retromolar intubation is easy and a safe option and also a non-invasive method.

Technique

The retromolar intubation is not a difficult procedure but needs proper training and proper selection of patients. Retromolar space dimensions in an adult male when assessed using dental pantomogram have been reported to have a mean height of 17.9 mm for the right space and 18.1 mm for left space. The mean width is 17.5 mm for the right and 16.51 mm for the left space [5]. Thus we can easily know the tube number which can fit into the space. Other practical way of accessing retromolar space is by introducing the middle finger in the patient's mouth and asking him or her to close the mouth, no compression of finger means adequate retromolar space [6].

The first step is to introduce flexometallic tube and orotracheal intubation is done under general anaesthesia. The tube is then mobilized with a gloved finger into the retromolar space. The tube is then fixed by elastic tape at the angle of mouth and orophynyngeal packing is done. On completion of surgery, proper suction of oral cavity is done and the oropharyngeal pack is removed.

Advantages

- The retromolar intubation provides benefit of avoiding surgical airway [tracheostomy or submental tracheal intubation] in panfacial trauma for surgery.
- The use of retromolar intubation can be a good alternative in airway management of paediatric maxillofacial trauma before narrowing of this space by the eruption of the permanent second molar. The eruption of last molar teeth limits the space for the retromolar tube intubation [7].
- Retromolar intubation is advantageous in craniofacial, orthognathic, oncologic and facial trauma surgery procedures.
- The intraoral structures including the tongue and intraoral secretions are bypassed.

Disadvantages

- Inspite of being very useful retromolar intubation also has some disadvantages. Retromolar intubation is not possible in individuals with narrow retromolar space. So proper assessment of space by dental pantomogram or by practical method is necessary.
- Tracheal tube in some surgical cases may interfere with the surgical field. It may also interfere with dental fixation devices, also in bilateral maxillary or mandibular fractures.
- Overenthusiastic fixation of tracheal tube can deform the tube.

Conclusion

Retromolar intubation though finds its limited role in anaesthetic practice but is a boon for the anaesthetist assisting surgeons for patients undergoing panfacial trauma. There should be precise assessment by the anaesthetist before patient selection, and with proper technique retromolar intubation can benefit number of patients.

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