Journal of Anesthesia & Clinical Research

OPEN ACCESS Freely available online

Short Communication

Airway Management in Temporomandibular Joint Ankylosis-Using Fibreoptic Bronchoscope: A Short Communication

Priya Pakal*, Tejaswi GM

Department of Neuroansethesia, National Institute of Mental Health and Neuro-Sciences, Bengaluru, India

ABSTRACT

Any trauma leading to haemarthrosis in Temporomandibular Joint (TMJ) may proceed to fibrosis and develop bony ankylosis. Causes of TMJ ankylosis may be congenital, trauma, infection, idiopathic and less frequently, rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, fibrodysplasia ossificans, etc. Awake intubation is the choice in difficult airway with fibreoptic intubation being gold standard technique. This article focuses on problems in managing anticipated difficult airway. Choanal atresia is a concern when encountered during airway management unknowingly. As a result, either a blind method or fiber optic bronchoscopy must be used for the intubation. The only available method for securing the airway is tracheostomy when the practitioner has experience of these techniques.

Keywords: Temporomandibular joint; Ankylosis; Tracheal intubation; Analgesia

DESCRIPTION

Difficult airway is defined as the clinical situation in which a conventionally trained anesthesiologist experiences difficulty with facemask ventilation of the upper airway, difficulty with tracheal intubation, or both [1]. The airway difficulty depends on patient factors, clinical factors and skills of anesthesiologist. The airway difficulties can be difficult mask ventilation/Supraglottic Airway (SGA) ventilation, difficult SGA placement, difficult laryngoscopy or difficult tracheal intubation. The end option in such a difficult airway encountered remains invasive neck access [2]. The invasive neck access to secure airway has its own complications and to avoid such practice, thorough knowledge and skills for managing difficult airway conventionally and unexpected problems is must for an anesthesiologist [3].

Challenges in securing airway

The patients with Temporomandibular Joint (TMJ) ankylosis may present with restricted or no mouth opening. Mallampatti grades of III or IV in association with limited neck movements adds difficulty, where securing definitive airway is a challenging for the anesthesiologist.

Choanal atresia increases difficulties in securing the airway, one may have to consider invasive neck approach.

Prerequisites in airway management

Patient co-operation holds upper hand in successful awake intubation. Difficult airway trolley, surgical neck access needs to be kept ready as a backup plan.

Premedication

Antianxiety medication like benzodiazepines, antisialogogues helps in smooth intubation. Anticholinergic agents reduce secretions, increase the speed of onset and duration of topical anesthesia [4].

Sedation and analgesia

Short acting opioids like fentanyl or alpha 2 agonists like dexmedetomidine can be safely used till the definitive airway is secured.

Airway anaesthesia

Awake intubation requires adequate analgesia and airway

Correspondence to: Priya Pakal, Department of Neuroansethesia, National Institute of Mental Health and Neuro-Sciences, Bengaluru, India, E-mail: pakalpriya@gmail.com

Received: 28-Nov-2023, Manuscript No. JACR-23-28103; **Editor assigned:** 30-Nov-2023, Pre QC No. JACR-23-28103 (PQ); **Reviewed:** 15-Dec-2023, QC No. JACR-23-28103; **Revised:** 22-Dec-2023, Manuscript No. JACR-23-28103 (R); **Published:** 29-Dec-2023, DOI: 10.35248/2155-6148.23.14.1118

Citation: Pakal P, Tejaswi GM (2023) Airway Management in Temporomandibular Joint Ankylosis-Using Fibreoptic Bronchoscope: A Short Communication. J Anesth Clin Res. 14:1118

anesthesia for the successful intubation. Nasal packing with cotton plugs soaked in lignocaine+adrenaline. Anaesthetization of pharyngeal and laryngeal mucosa using lignocaine 4% nebulization. Superior laryngeal nerve block and transtracheal block for vocal cord anaesthetization.

Choice of airway management

The method of securing airway depends on patient condition, equipment available and the treating physician skills. Fibreoptic intubation is considered gold standard technique in such scenario. With limited mouth opening nasal intubation is the technique of choice, but choanal atresia (if membranous) requires serial dilatation using lubricated nasogastric tubes and smaller size endotracheal tubes before securing definitive airway.

When passing preloaded Endotracheal Tube (ETT) over scope is difficult from one nostril, ETT can be passed from one nostril and scope from another nostril. Under scopic vision ETT can be passed into trachea.

Extubation

While extubating patients with difficult airway, ensure that adequate neuromuscular recovery, patient is fully awake, vocal cord movements are present and patient is breathing adequately. Extubation over airway exchange catheter or fibreoptic scope may prevent untoward loss of airway if anticipated.

CONCLUSION

Anesthetic management in patients of TMJ ankylosis presents dreadful challenges to the Anesthesiologist in maintenance of airway patency. Inability to open mouth makes direct laryngoscopy difficult. Hence, the intubation has to be done either by blind technique or by fibreoptic bronchoscopy. When the practitioner is lacking knowledge of these technique's tracheostomy is the only option left for securing the airway.

Awake intubation and spontaneous ventilation are the safest techniques for securing airway, as these patients should never be given relaxants till the control of airway is achieved. Awake intubation needs patient's co-operation. The problem may be compounded by uncooperativeness (especially in pediatric patients), coughing, bucking and reflex responses while awake intubation is attempted. A thorough preoperative evaluation and assessment as well as imaging (if needed) can aid successful airway management using bronchoscope.

REFERENCES

1. Malik NA, editor. Textbook of oral and maxillofacial surgery. JP Medical Ltd. 2012.
2. Williamson R. Blind nasal intubation and (or) fibreoptic guided intubation?. Anaesthesia. 1989;44(2):176-177.
3. Robert A. Practice guidelines for management of the difficult airway-An updated report by the American Society of Anesthesiologists Task Force on Management of the Difficult Airway. Anesthesiology. 2003;98(5):1269-1277.
4. Orebaugh SL, Bigeleisen PE. Atlas of airway management: techniques and tools. Lippincott Williams and Wilkins; 2012.