ISSN NO. 2320-5407

Journal homepage: http://www.journalijar.com
Journal DOI: 10.21474/IJAR01

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH

RESEARCH ARTICLE

BLIND NASAL INTUBATION- ITS RELEVANCE TODAY

Dr. Ismail J. Namazi (M.B.B.S, M.D)[1], Dr. Ravi Bhaskar Kumar (M.B.B.S)[2] , Dr. Nikunj Garia (M.B.B.S)[2], Dr. Ameesha Sharma (M.B.B.S)[3], Dr. Medha Mozumder (M.B.B.S)[4].

1. Professor, Department of anaesthesia dr. D. Y. Patil hospital Kolhapur, Maharashtra, 416001.
2. 3rd year Post graduate student, Room no. 22, 5th floor Dr. D.Y. Patil hospital Kolhapur, Maharashtra, 416001.
3. 3rd year Post graduate student, Department of anaesthesia, Dr. D. Y. Patil hospital Kolhapur,Maharashtra, 416001.
4. 2nd year Post graduate student, Department of anaesthesia, Dr. D. Y. Patil hospital Kolhapur,Maharashtra, 416001.

Manuscript Info *Abstract*

Manuscript History:

Received: 14 February 2016
Final Accepted: 19 March 2016
Published Online: April 2016

Key words:
Reduced mouth opening, Blind nasal intubation, Difficult airway, radical neck dissection.

Corresponding Author

Dr. Ismail J. Namazi.

Airway management is core for an anesthesiologist. Airway difficulties during induction of general anesthesia are a concern for anesthesiologists. Hence a good clinical judgment is important for selecting the method for airway intervention. In patients of Mallampatti classification - IV or reduced mouth opening there are three methods for securing the airway. The most advanced and recommended method is awake nasal intubation using fibro-optic bronchoscope. The second option is retrograde intubation. The last method is blind nasal intubation. This method was regularly used to intubate patients of nil mouth opening before the fibro-optic bronchoscope was introduced. In experienced hands of an anesthesiologist, this is a very good method to secure the airway. It requires very little time compared to the first two methods and does not require expensive instruments. In today's time blind nasal intubation is not performed regularly as the modern anesthesiologists are more dependent on instruments such as video-laryngoscope etc. However in centers where such expensive instruments are not available or in remote centers, blind nasal intubation can be the key for securing the airway for patients with difficult airway. Here we report a patient who is a case of squamous cell carcinoma of the cheek with reduced mouth opening posted for right wide excision of lip with forehead flap sos radical neck dissection managed with blind nasal intubation.

Introduction:-

Difficult airways are a major concern for anesthesiologists.(Yoo H et al, 2015) Securing the airway for such patients have always been a challenge. The incidence of difficult intubations has been reported to be 5.8%–6.2% in patients who have undergone general surgery (Shiga T et al, 2005). Even though fiberoptic intubation is the gold standard for management of difficult airways, it cannot be performed on soiled airway or upper airways with pre-existing narrowing pathology (Hagberg CA. et al, 2013). Furthermore, it is not available at every medical institution. Retrograde intubation is also a good method of intubation but its disadvantages are it being too invasive and time taking. Patient can land up in hypoxia during the procedure. Blind nasal intubation is a readily available technique for management of difficult airways, such as those in patients with a restricted mouth opening (Finucane BT et al, 2011). We present a case of blind nasal intubation used as an alternative intubation approach on a patient with a Mallampati grade – IV.

Case history:-

A 56 yr old male was admitted to DR. D. Y. PATIL HOSPITAL KOLHAPUR for complaints of an ulcer with discharge present for 20- 25 days on the right edge (angle) of the right side of the mouth. He was a tobacco chewer as well as an alcoholic for the last 35 years. He did not have any other medical, surgical or family history. His vitals were Pulse rate- 80bpm/regular, Blood pressure- 140/80 mm of hg.

Airway examination showed reduced mouth opening, neck movements were adequate. Thyromental distance was more than 6 cm and both nostrils patent.

Figure 1: Reduced mouth opening

He was diagnosed to have carcinoma of oral mucosa, confirmed by biopsy report suggesting well differentiated squamous cell carcinoma and was posted for RIGHT WIDE EXCISION OF LIP WITH FOREHEAD FLAP.

Radical neck dissection:-

Investigations:

Hb-13.7gm/dl, Other investigations – WNL (within normal limits), Cervical

Spine x-ray – Normal, ECG-WNL Chest X ray – Straightening of the left heart border

Securing the airway was the utmost priority in such patients, we had options of blind nasal intubation, retrograde intubation, fiberoptic nasal awake intubation, surgical or percutaneous tracheostomy. Our first preference was for fiberoptic intubation. However that requires experienced hands and is a costly equipment. Hence we decided to go for blind nasal intubation for this patient. Informed consent was taken for the procedure.

Patient was premedicated with Inj. glycopyrollate 0.2mg iv, Inj. Ondansetron 4mg iv, Inj ranitidine 50 mg intra drip

Routine hemodynamic monitors were attached, oxygen was supplemented with nasal prongs at 2lits/min.

An ENT surgeon was on standby for emergency tracheostomy.

Under all aseptic precautions, Patient was pre-oxygenated with 100% FiO2 for 5 minutes. Induced with Inj Propofol 120mg I/V. Adequate bag and mask ventilation present. Patient was intubated with cuffed ET tube number 7.5 nasally. Bilateral air entry equal. Tube fixed and cuff inflated. Maintained on O2/N2O/Sevoflurane .Muscle relaxant Inj Vecuronium I/V given. Patient tolerated the surgery well, hemodynamically stable. After the end of surgery all inhalational agents stopped. Oral and nasal suctioning were done. Patient was shifted to SICU and kept intubated to allow reduction in swelling and was extubated the next day after assessing the airway for swelling and active bleeding.

Discussion:-

Oral squamous cell carcinoma (OSCC) is the most common malignant epithelial neoplasm affecting the oral cavity. It is most often seen in those who chew or smoke tobacco and who drink alcohol. It is also more commonly seen in elderly male and in the lower socio- economic group. One of the real dangers of this neoplasm, is that in its early stages, it can go unnoticed.(Markopoulos A.K. et al, 2012)Common sites for OSCC to develop are on the tongue, lips and floor of the mouth. Metastases from OSCC, when present, will occur in cervical lymph nodes in almost 80% of patients.

It is generally accepted that prognosis is best in early OSCC, especially those that are well-differentiated and not metastasized: unfortunately, most OSCC are diagnosed at a late stage of the disease. Because of the growth being present in the oral cavity, the mouth opening of the patient is usually restricted or nil at times.

Securing the airway was the utmost priority in such patients.

Awake fiberoptic intubation is a more recent technique, and is considered the safest and most effective method in known or suspected cases of difficult airway under direct vision. However, the disadvantage is that it is technically demanding and an expensive option. Fiberoptic bronchoscopy is not available in every medical institution. (Yoo H et al, 2015)

Blind nasal intubation was the method opted for endotracheal tube insertion in this patient. The advantage of blind nasal intubation is that it can be rapidly achieved in experienced hands while avoiding the stimulation of rigid instrumentation in patients. (Hall C.E.J et al, 2003)

Conclusion:-

Inability to secure airway in patients of difficult airway is the most common cause for the death of these patients. Blind nasal intubation can be a valuable alternative to awake fiberoptic intubation in cases of difficult airway when expertise of fiberoptic intubation is not available or the availability of the instrument itself is in question because of its high cost. We managed this case of reduced mouth opening successfully with blind nasal intubation.

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