

International Journal of Dental Science and Innovative Research (IJDSIR)

IJDSIR : Dental Publication Service

Available Online at: www.ijdsir.com

Volume - 7, Issue - 1, February - 2024, Page No. : 72 - 76

Case Report: Awake Oral Intubation in A Patient With Cellulitis On Front Neck Region And Supraglottic Growth Posted For Tracheostomy

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Citation of this Article: Dr Karan Juneja, Dr Garima Sangwan, Dr Bharti Yadav, Dr Divya, Dr Priyanka Dahiya, Dr Savita Saini, "Case Report: Awake Oral Intubation in A Patient With Cellulitis On Front Neck Region And Supraglottic Growth Posted For Tracheostomy", IJDSIR- February – 2024, Volume –7, Issue - 1, P. No. 72 – 76.

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Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Difficult airway management, including challenging mask ventilation and intubation, remains a significant challenge for anaesthesiologists throughout the induction of general anaesthesia. Mask ventilation, which is the primary method of airway management prior to intubation or the placement of any airway device, is particularly problematic. Furthermore, it serves as a rescue manoeuvre in cases where endotracheal intubation is unsuccessful or an unforeseen challenging intubation arises. As a result, the first stage in any complex airway algorithm is mask ventilation.[1]

In this report, we encountered a patient with chief complaint of Difficulty in breathing with cellulitis on front neck region and significant supraglottic growth. In which we anticipated challenges with difficult intubation. Conscious sedation was administered subsequently, a safe awake intubation was conducted with Macintosh Blade.

Keywords: Endotracheal, Lignocaine, Oximeter

Case Report

70 years old, 68 kg male came to preanaesthetic checkup for Tracheostomy. The patient had complaint of Difficulty in swallowing and change in voice. Patient underwent ENT OPD & Indirect Laryngoscopy reveals ulcer proliferative lesion on supraglottic including the vallecula. The patient had history of chronic tobacco chewing. His investigations were within normal limits Except for raised TLC count. On assessment mouth opening was restricted and Neck movements were also restricted, while assessing the modified Mallampati (MMP) Classification, the uvula, soft and hard palate were visible [Figure-1] Patient had history of abnormal sound while speaking. On seeing the condition of the patient Cellulites seen on front neck region [Figure-2] He is of average built and systemic examination revealed a normal cardiovascular and respiratory systems. The patient was approved for Class II of the American Society of Anaesthesiologists.

A mass is obstructing the airway or swelling is making it difficult to breathe and difficult in swallowing so the Tracheostomy was planned under general anaesthesia. Considering that we had planned to secure the airway with awake intubation under conscious sedation because of Anticipated difficult intubation.

Ultimately, we decided to do nasal intubation on the right side utilising the Awake intubation technique. The procedure was thoroughly elucidated to both the patient and their family, and their informed permission was acquired. The patient had a period of fasting for 8 hours before the procedure.

On the day of surgery, the patient was transferred to Pre op area & Xylometazoline was instituted in the both nasal cavity for nasal decongestion &Nebulized with Lignocaine 4% & oral cavity was sprayed with Lignocaine 10%. After a duration of 10 minutes, the patient was transferred to the operating room and various monitoring devices such as an electrocardiogram, noninvasive blood pressure monitor, pulse oximeter, and temperature probe were attached. A venous access was established using an 18-gauge intravenous cannula. A Foley catheter was used to catheterize the patient. Verification was conducted to ensure the presence and operational status of all components of the challenging airway trolley.

A rescue ventilation device was prepared, and standby arrangement for emergency tracheostomy was also prepared. Injection midazolam 0.05mg/kg Intravenous given to relieve anxiety & Injection Glycopyrrolate 0.2mg were given to reduce secretions. Injection Fentanyl 2mcg/kg & Injection dexmedetomidine 0.5mcg/kg were given intravenously bolus & infusion started 4 mcg/kg/hr& sedation was assessed There was no hypotension or bradycardiaduring the infusion of dexmedetomidine.

The nasal passage was lubricated with 2% lidocaine jelly. Serial dilation of the nasal cavity was performed using nasopharyngeal airways with internal diametersof 7 mm.

& Connector relates to Nasopharyngeal airway with oxygen supplementation given with Bains circuit for apnoeic oxygenation. [Figure-3]

The Video Laryngoscope (C-MAC) having Blade 4 was then inserted. The patient responded and was told to breathe slowly and deeply. The epiglottis and the vocal cords were examined before inserting the 7.5mm ET tube. The patient coughed as the ET tube entered the

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vocal cord. Once the vocal cord opened, 4% lidocaine was sprayed. After opening the vocal cord, intubation went well. [Figure-4]

By evaluating bilaterally equal air entry and end-tidal CO2 tracing, the ET tube's location was validated. The ET tube was fixed. Propofol 2mg/kg and Atracurium 0.5mg/kg were administered intravenously. After stopping dexmedetomidine infusion, the patient was maintained on ventilatory support while the surgeon began surgery. The patient received oxygen, Fentanyl, Atracurium, and Isoflurane intraoperatively. Patients tolerated the surgery well.

ET tube was withdrawn after oral suctioning and tracheostomy tube connected to the ventilator [Figure-5]. Intraoperative phase was unremarkable. Total loss of blood was 50 ml. After an operation, the patient was placed on mechanical breathing with propofol sedation in the ICU. We did not extubate the patient since glottic oedema would make intubation difficult. Extubation was accomplished the next day. Pt weaned off ventilator and tracheostomy tube using T-piece on oxygenation @4L/min after extubation. No complications followed surgery.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5

Discussion

It has been estimated by Benumof et al. that up to 30% of deaths are due to inability of successful airway management.[2] In our patient The mouth opening was <3 finger, and the use of an oral alternative airway device for intubation was limited. There is no availability of fiberoptic bronchoscope in our institution. So, with limited airway gadgets we must performed Intubation with pt having supraglottic growth & restricted mouth opening.

To avoid complications & for the sake of patient safety, Pt is decided to accepted for tracheostomy under awake intubation. Significant obstacles encountered during Awake intubation include the provision of sufficient sedation, the maintenance of an unobstructed airway, and the assurance of enough spontaneous breathing. Various medication classes, including as benzodiazepines, opioids, alpha2 agonists, propofol, and ketamine, have been documented as being used for conscious sedation during awake intubation.[3]

Dexmedetomidine is a strong alpha2 adrenergic receptor agonist that exhibits great selectivity. It possesses the capacity to induce deep drowsiness without inducing respiratory depression. Furthermore, dexmedetomidine could reduce salivarv production by exerting sympatholytic and vagomimetic effects. This characteristic proves to be beneficial for fiberoptic intubation.[4][5]

Preliminary assessment of the airway using computed tomography (CT) yielded valuable insights for the strategic planning of airway management.

V. K. Dimitriou et al reported four cases of awake tracheal intubation with the AL in patients with anticipated difficult airway. Management of the potential difficult airway remains a major challenge. [6] Recent reports have demonstrated that the use of the AL is superior to the Macintosh laryngoscope in patients at low or increased risk for difficult intubation. Additionally, the AL has been used successfully in several cases with difficult airway management, including post-traumatic asphyxia [7].

Conclusion

To summarize, we present a case of 70 years old, male patient posted for Tracheostomy performed under awake intubation due to predicted Difficult intubation in a patient with a cellulitis on Neck region & restricted mouth opening. With limited resources like Fiberoptic Bronchoscope.

In addition, awake fiberoptic intubation may be the alternative to awake tracheal intubation with a video laryngoscope.

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