Awake airtraq intubation in plexiform neurofibroma of face: A new experience

Sir,

Plexiform neurofibromas (PNF) are benign tumors originating from nerve sheath cells, subcutaneous, or visceral peripheral nerves and can involve multiple fascicles. It is an autosomal dominant condition and occurs exclusively in patients of type 1 neurofibromatosis.[1] It develops in about 30% of the patients of type 1 neurofibromatosis. Management of airway is challenging in these patients especially if it involves face. Airtraq optical laryngoscope is a new intubation aid for the management of routine and difficult intubation.[2] It consists of a curved blade with two side by side channels meant for endotracheal tube and optical system. It provides a good illuminated view of the glottis without applying much force. Awake intubation with Airtraq laryngoscope is a reasonable choice in these patients because of difficult face mask ventilation.

A 17-year-old male patient of ASA grade 1 was posted for debulking operation of facial plexiform neurofibroma. His preoperative parameters were within normal range. On airway examination patient was assessed as Mallampatti grade IV. The interincisor gap was 1.8 cm. Thyromental and hyomental distance were 7.0 cm and 6.5 cm respectively. Neck movements were within normal limits. Mask ventilation was impossible due to the presence of large plexiform neurofibroma that prevented effective mask seal [Figure 1]. Since the fiber optic bronchoscope was nonfunctional we decided to use Airtraq optical laryngoscope for awake intubation. After explaining the procedure the patient was premedicated with injection (inj) ondansetron, Inj Fentanyl and Inj Midazolam. The patient was nebulized with lignocaine 4%. Superior laryngeal nerve was blocked bilaterally using 2 ml of 2% lignocaine. Trachea beyond the vocal cord was blocked injecting 2% of 2 ml lignocaine though cricothyroid membrane. Airtraq laryngoscope was inserted into the valeculla and performing required standard maneuvers the glottic opening was centralized and trachea intubated. The patient was then induced with Inj Propofol

Figure 1: Photograph showing a distorted face due to plexiform neurofibroma

and relaxed with Inj vecuronium. Anaesthesia was maintained with oxygen, nitrous oxide, and propofol infusion. All the standard monitors were applied. At the end of the surgery the residual neuromuscular paralysis was reversed with inj neostigmine and glycopyrrolate.

Plexiform neurofibroma is a condition exclusively seen in patients of type 1 neurofibromatosis. Intraoral manifestation is seen in around 5% of the patient.[3] It poses great challenge to anesthesiologist specially related to airway management. Plexiform neurofibroma of cervical region and parapharyngeal area can cause airway distortion. In our patient even mask ventilation was not possible due to facial disfigurement. The interincisor distance was decreased due to the presence of facial neurofibroma worsened by scarring specially in the region of lip and internal aspect of right cheek due to previous surgery. Awake intubation using fiberoptic bronchoscope has been considered as the gold standard for the management of such patients. Other newer devices including intubating laryngeal mask airway, LMA Ctrach, Glidescope, fiberoptic assisted intubation, or Airtraq a new laryngoscope may be successfully used. Airtraq guided intubation has been tried in normal and difficult Airways including cervical spine immobilization[4] and morbidly obese patients. Majority of studies have been done on manikins. There are some specific advantages of Airtraq over other devices. It is not necessary to align oral, pharyngeal, and laryngeal axis and also less force is required to visualize glottic opening with Airtraq laryngoscope. There are lesser haemodynamic perturbations with Airtraq. Besides, it is cheap, portable, and requires a shorter learning curve[5] compared to the fibreoptic bronchoscope. Due to the unique property of the Airtraq optical laryngoscope of possessing an extremely curved blade and the inbuilt optical system in one of the two channels, it makes even a difficult intubation easier by indirectly giving a panoramic view of the glottic opening from the eye piece of the Airtraq. The present case reveals the utility of the Airtraq optical laryngoscope in a difficult situation in which even mask ventilation is challenging.

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