

Failed Flexible Fiberoptic intubation due to Anatomic Anomaly: An Anaesthesiologist’s nightmare

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Introduction

Fiberoptic intubation is considered as a boon to anaesthesiologists managing difficult airways. It has a success rate of over 87–100% in difficult intubations ^[1]. But failures do occur even with fibrescopes. Reasons being distorted airway anatomy, lack of expertise, presence of secretions or blood, lack of sufficient topical anaesthesia, etc. ^[2]. We hereby report a case of failed fibre-optic intubation due to anatomical abnormality where retromolar intubation was done successfully.

Case Report

A 45-year female patient weighing 55 kg with history of RTA was planned for elective fixation of fracture femur, patella and mandible. Pre-anesthetic evaluation revealed normal systemic examination and laboratory findings. On airway examination, mouth opening was restricted to 1 finger so Mallam Pati grade could not be assessed. Other parameters such as thyromental, hyomental and sterno-hyoid distances were within normal limits. Nasal patency was decreased on left side as compared to right. Nasal fiberoptic intubation was planned for this case. On the day of surgery difficult airway cart was kept ready in

the operating room. The patient was pre-medicated with 0.2 mg of Glycopyrrolate and 100 µg of Fentanyl intravenously (i.v.). Flexible fiberscope was introduced through right nostril after induction with propofol 100mg i.v. while maintaining spontaneous ventilation and oxygenation. While negotiating the flexible tip of the fiberscope, the entire view went blurred because of the tip coming in contact with some bony structure. We tried on another nostril but in vain, as the fiberscope failed to pass beyond few centimeters in that nostril too. Meanwhile, patient developed signs of airway obstruction. Patient was oxygenated and her saturation was maintained. Direct laryngoscopy with Macintosh blade was done which revealed absence of uvula. Patient was intubated with retromolar approach using an oral flexometallic tube of 6.5 mm ID. Endotracheal tube was secured using wire ligature in ‘figure-of-8’ pattern.



Figure 1

After securing the tube, muscle relaxant was given and surgery was started. We were unable to pass the suction catheter and nasogastric tube through left nostril showing that there was no opening between nasopharynx and oropharynx on left side. On right side there was only a slit-like opening which resulted in failure of nasal fibreoptic intubation. At the end of the surgical procedure, mouth opening was adequate, the wire ligature around the tracheal tube was removed and the tube moved back to a standard orotracheal position, and the patient was then extubated.



Figure 2

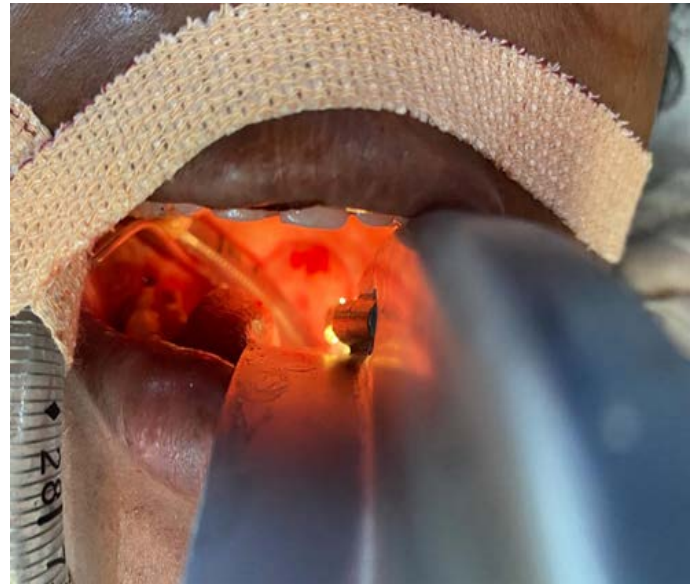


Figure 3

Discussion

Flexible fibreoptic intubation is the gold standard technique for an anticipated difficult airway^[3,4], but in the above case, failure of fibreoptic intubation occurs due to anatomical abnormalities observed in patient's airway. Thus oral intubation was done using retromolar approach. Retromolar space is bounded anteriorly by the last erupted molar, posteriorly by the ramus of the mandible, superiorly by the maxillary tuberosity and inferiorly by the retromolar trigone. There are high chances of displacement of an oral endotracheal tube during mandible repair so we secured our tube with wire sutures. Thus retromolar space is a potential space for ETT placement when nasal intubation is not possible in intra-oral surgeries.^[5]

Conclusion

There can be failure to intubate with Flexible fibreoptic bronchoscope as well; thus, one should always have an appropriate back up plan as well as training for securing the airway with different approaches to prevent any airway catastrophe.

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