



Anaesthesiology

AIRWAY MANAGEMENT WITH AWAKE FIBREOPTIC INTUBATION IN A PATIENT HAVING ORAL SUBMUCOSAL FIBROSIS

Dr Sonal Raj*	Post Graduate Third Year Resident, Department Of Anaesthesiology, Shri M.p. Shah Govt. Medical College, Jamnagar. *Corresponding Author
Dr Meera Zala	Md, Assistant Professor, Department Of Anaesthesiology, Shri M.p. Shah Govt. Medical College, Jamnagar.
Dr Purvi Porecha	Md, Associate Professor, Department Of Anaesthesiology, Shri M.p. Shah Govt. Medical College, Jamnagar.
Dr Gopi Marfatia	Md, Senior Resident, Department Of Anaesthesiology, Shri M.p. Shah Govt. Medical College, Jamnagar.

ABSTRACT Oral submucous fibrosis (OSMF) is mainly associated with betel nut and tobacco chewing and is a premalignant condition of buccal mucosa. Inflammation, increased deposition of submucosal collagen and progressive fibrosis of the submucosal tissues resulting in marked rigidity which increasingly limit mouth opening are characteristic features of OSMF. This case report discusses the anaesthetic and surgical management of a 35 year old male patient with 5 mm mouth opening who was operated for fibrotomy and reconstruction with BFP (Buccal fat pad) for oral submucosal fibrosis.

KEYWORDS : Oral submucous fibrosis, fibreoptic intubation, reduced mouth opening, submental flap.

INTRODUCTION

Oral submucous fibrosis (OSMF) is characterised by slow progressive development of fibrous bands beneath the oral mucosa associated with secondary mucosal atrophy. It is a collagen disease of insidious onset associated with chronic local irritation, inability to open the mouth or limited opening of the oral cavity. These patients have struggle in consuming normal diet and maintaining good oral hygiene. They require general anaesthesia for trismus correction, resection or reconstructive surgery for coexisting oral malignancies or other than dental surgeries. They have a difficult airway as OSMF hinders regular laryngoscopy and intubation of the trachea. When encountered with an anticipated difficult airway, there should be an appropriate plan for airway securing. In OSMF cases fibreoptic intubation being the gold standard, the ultimate choice is tracheostomy. Here we present a case of OSMF successfully managed by fibreoptic intubation followed by surgical excision of fibrous bands and reconstruction of the defect with buccal fat pad.

Case Report

A 35 years male, weighing 50 kgs, presented with a complaint of progressive inability to open mouth. Patient was tobacco chewer since 7 years, cigarette smoker and alcoholic. Patient had history of ischemic heart disease, that was presented with chest pain and breathlessness which was treated conservatively 8 months back. Patient was also known case of hypertension since 8 months which was under control with medication (T. Betaloc (25) 1-0-1, T. Enalapril (5) 1-0-1)

Examination revealed 0 finger mouth opening (FMO) and mallampati grading which was inaccessible and neck movements were normal. General examination showed he was conscious and oriented to time, place and person. Systemic examination was within normal limits. All routine investigation was normal. Vital parameters pulse, blood pressure, respiratory rate and O₂ saturation were within normal limits.

Anaesthetic plan for securing airway was fiberoptic nasal intubation. The procedure was explained to patient and written informed consent was obtained. Patient was kept fasting for 6 hours before surgery. No preoperative sedation was given.

On the day of surgery, after giving lignocaine viscous gargles, nebulisation was done with 4 ml of 4% lignocaine. Nasal packing was done with roller gauge soaked in xylometazoline and 2% lignocaine with adrenaline in both the nostrils. Lidocam chewable oral tablet was given. 20 G iv cannula secured and crystalloid solution started. Oxygen was given with venturi-mask at 4 L/min in preanaesthetic area.

Patient was shifted to OT. Difficult airway cart was kept ready along with emergency tracheostomy trolley. In the operation theatre multi para monitors were connected for continuous monitoring of heart rate,

oxygen saturation, ECG, end tidal CO₂ and non invasive blood pressure and baseline vitals were recorded. Inj. ondansetron 4mg iv, Inj. Glycopyrrolate 0.2 mg, Inj. midazolam 0.5 mg, Inj. fentanyl 50 mcg IV were given and nasal packing was removed and patient's airway was anaesthetized by application of lignocaine spray 10%. Superior Laryngeal nerve block with Injection Lignocaine 2%, 2ml given on both the sides. Transtracheal instillation with Injection Lignocaine 2% 2ml administered. FOB was loaded with a 7.5 mm endotracheal tube. After informing to the patient the bronchoscope was inserted through a nostril and advanced towards laryngeal inlet. The fiberscope was negotiated through the vocal cords and positioned above carina. Lubricated endotracheal tube was threaded over the FOB, and FOB was removed. ET tube was attached to the breathing circuit and its position was confirmed by movement of reservoir bag and capnography. After checking bilateral air entry, injection propofol 160mg IV, injection vecuronium 4mg IV were given, ET tube was fixed. Patient was maintained on 40% oxygen, 60% nitrous oxide, sevoflurane and intermittent injection vecuronium IV. After 90 minute of 1st dose of fentanyl, as surgery lasted for 3 hrs, repeat dose 50 mcg iv fentanyl was given.

After completion of surgery, neuromuscular blockade was reversed with Inj. Neostigmine 2.5 mg iv And Inj. Glycopyrrolate 0.4 mg iv slow. Patient was extubated after he was breathing well, obeying commands and had adequate tone. Surgery was performed uneventfully under general anaesthesia and successful anaesthetic management was done.

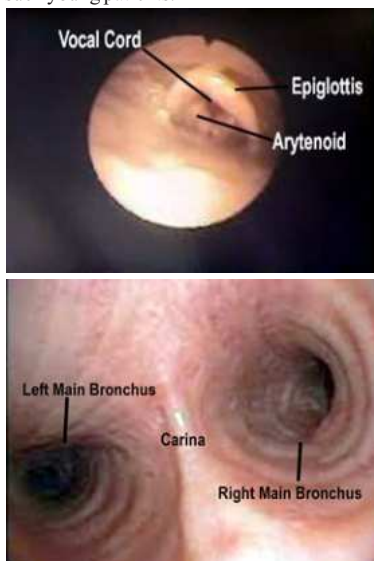
DISCUSSION

Oral submucosal is a chronic disease that may affect any part of the oral cavity and at times it may affect the pharynx, leading to stiffness of the oral mucosa causing trismus resulting in progressive inability to open the mouth. The discomfort caused by awake FOB intubation can be attenuated by airway preparation and topicalisation techniques including nebulizer, atomizer, aerosols or "spray as you go" technique, lignocaine (4%) gargles, intratracheal injection, regional airway blocks, sedation which eases the patient and making it being known as technique of choice for securing difficult airway. In this case, preparation of patient before surgery with antisialagogue glycopyrrolate, mild sedation with midazolam and nebulization and in OT airway block helped to intubate the patient smoothly and successfully without any discomfort. In patients with difficult airway tracheostomy is the next choice in awake state with other options being blind nasal and retrograde intubation. These procedures cause discomfort to the patient and complications like hemorrhage, subcutaneous emphysema, pneumomediastinum, pneumothorax, recurrent laryngeal nerve damage, infection, and stenosis and scarring.

CONCLUSION:

The characteristic feature of OSMF is extremely restricted mouth

opening and distortion of airway rendering difficult intubation. Anaesthesiologist should have a high degree of suspicion and carefully examine the airway of the patients who abuse betel quid leading to OSMF. Airway securing by the awake fiberoptic intubation is the gold standard and ideal method in this case and any similar case with difficult airway. Invasive procedures like tracheostomy can be prevented in such young patients.



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