



AIRWAY MANAGEMENT WITH AWAKE FIBROPTIC INTUBATION IN A PATIENT HAVING ORAL SUBMUCOSAL FIBROSIS POSTED FOR INTRALESIONAL SUBMUCOSAL FIBRECTOMY HAVING ONE FINGER MOUTH OPENING (10MM)

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ABSTRACT Oral submucous fibrosis (OSMF) is a premalignant condition of buccal mucosa mainly associated with the practice of chewing betel quid and tobacco containing areca nut. It is characterized by inflammation, increased deposition of submucosal collagen and progressive fibrosis of the submucosal tissues resulting in marked rigidity which increasingly limit mouth opening and cause trismus.¹ This case report discusses the anaesthetic management of a 25 year old with 10mm mouth opening who was posted for intralesional submucosal fibrectomy surgery. Airway was secured by awake Fibre-Optic Bronchoscope (FOB) intubation in this anticipated difficult airway case with appropriate topicalisation of airway.

KEYWORDS : Difficult Airway, Restricted mouth opening, Awake Fibreoptic Intubation, Oral Submucosal Fibrosis.

INTRODUCTION

OSMF is characterised by the slowly progressive development of fibrous bands beneath the oral mucosa with secondary mucosal atrophy. It is believed to be a collagen disease of insidious onset associated with chronic local irritation, limited opening of the oral cavity or inability to open the mouth.²

The patients with OSMF have a struggle in consuming normal diet and maintaining good oral hygiene. They require general anaesthesia for trismus correction, resection or reconstructive (oncoplastic) surgery for coexisting oral malignancies or other unrelated surgeries. They have a difficult airway as OSMF hinders regular laryngoscopy and intubation of the trachea.^{2,3}

Here we present a case of OSMF successfully managed at Dhiraj hospital with awake FOB intubation.

CASE DETAILS

A 25 year old female of 40kgs, presented with complaints of progressive limitation to open the mouth and gave history of recurrent cheek bite. She was diagnosed with submucosal fibrosis since three years and was only on liquid diet. She was posted for intra-lesional submucosal fibrectomy. Past medical history was insignificant. General examination showed she was conscious, oriented and vitally stable. Airway assessment revealed that the inter incisor distance was 1cm or one finger mouth opening, mallampati grading was not able to be assessed and neck movements were normal. Systemic examination were within normal limits. All routine investigations were normal.

Anesthetic plan for securing airway was awake fibre-optic nasal intubation. The patient was explained about the procedure written informed consent was obtained for the same. Patient was kept fasting for 6 hours before surgery. No pre-operative sedation was given. On the day of surgery, after giving lignocaine viscous gargles, nebulization was done with 4ml of 4% lignocaine. Nasal packing was done with roller gauge soaked in Xylometazoline and 2% lignocaine with adrenaline in both the nostrils. 18G IV cannula secured and crystalloid solution started. Oxygen was started with ventimask at 5litres/min then Injection Glycopyrolate 0.2mg IM and Injection Midazolam 1mg IM was given. Patient was shifted to OT after half an hour. Difficult airway cart was kept ready including that for emergency tracheostomy. In the operation theatre multipara monitors were connected for continuous recording of heart rate, oxygen saturation, electrocardiogram, end tidal CO₂ and non invasive blood pressures and baseline vitals were recorded. Injection ondansetron 4mg IV, Injection 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 6.0 mm armored Endotracheal (ET) 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 and Injection propofol 80mg IV, Injection vecuronium 4mg IV were given, ET tube was fixed. Patient was maintained on 50% oxygen, 50% nitrous oxide, isoflurane and intermittent injection vecuronium IV and injection fentanyl IV.

After completion of surgery neuromuscular blockade was reversed with Injection Neostigmine 2mg IV & Inj Glycopyrrolate 0.3 mg IV. Patient extubated after she was breathing well, obeying commands and maintaining airway. Surgery was performed uneventfully under General Anaesthesia and successful anaesthetic management was done.

DISCUSSION

Oral submucosal is an insidious, chronic disease that may affect any part of the oral cavity and sometimes 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 nebulizer⁴, atomizer⁵, aerosols or "spray as you go" technique⁶, gargling⁷, transtracheal injection⁸, airway regional blocks⁹, sedation¹⁰ which eases the patient and making it being known as technique of choice for securing difficult airway. In this case, preparation of patient half hour before surgery with antisialogogue 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, 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 scarring¹¹.

Sujee C et al in 2011 presented a case report on 28year old man, case of oral submucosa fibrosis with history of betel quid chewing with mouth opening of 1cm and was planned for resection of the fibrotic bands bilaterally followed by temporalis muscle myotomy and coronoidectomy with appropriate reconstructive options were planned. Awake FOB intubation under topical anaesthetic agent was performed with tracheostomy as a back up in view of anticipated difficult intubation.¹²

CONCLUSION

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.

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