



Rescue Intubation Using a Light Wand (Trachlight) In a Case of Failed Fiberoptic Intubation in a Patient with Bleeding Oral Hemangioma (A Case Report)

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Abstract

Hemangiomas of tongue are rare congenital disease associated with difficult airway and present some hazardous complication like bleeding causing airway emergency. Here we present a case report of Successful airway management in a patient having bleeding hemangioma of tongue with light wand after a failed fiberoptic intubation attempt.

Keywords- *hemangioma tongue, fiberoptic, light wand*

INTRODUCTION

Hemangiomas are benign neoplasms of endothelial cells result from endothelial cell proliferation. The term hemangioma has been commonly used to describe a large number of vasoformative tumors. They are not present at birth but usually found in early infancy.

Hemangiomas of the oral cavity are not common pathologic entities, but, among hemangiomas, the head and the neck are common sites. Inside the oral cavity, they are more common in the dorsal side of the tongue. Such hemangiomas in the oral cavity are more frequent in the lips, with a low incidence in the tongue and

more commonly found in females – 65% of the cases.⁽¹⁾

Most true hemangiomas involute with time, but a certain small percentage do not, which may present with complications that require treatment. An estimated 10-20% of true hemangiomas incompletely involute and require post-adolescent ablative treatment.⁽²⁾

Numerous therapies have been used in an attempt to treat hemangiomas when complications develop during the proliferative phase. These regimes include high-dose steroids, α -interferon, and chemotherapeutic agents. Treatment of the more extensive lesions may need embelotherapy, laser,

cryotherapy or radical surgical treatment necessary to eradicate them. For high-flow vascular malformations, complete resection of extensive tumors can be a formidable task.⁽²⁾

Anesthesiologists must be concerned with any airway vascular abnormality because of complication like torrential bleed to losing airway like can't intubate or can't ventilate scenario. In this paper, the authors report airway management of a rare presentation of vascular malformation in the tongue posted for surgery.

CASE REPORT

A 40 yr female present with difficulty in speech, eating, and unusually ugly large tongue causing difficulty in closing mouth in department of plastic surgery, SCB medical college cuttack.

The mass is present since birth, steadily growing but growth is faster since last 2-3 yr. There is history of repeated bleeding during cleaning of tongue, brushing. Additionally, patient have sleeping problem due to snoring.

On physical examination findings were: female adult, conscious, alert and cooperative.

Vital signs: Heart rate: 98 per minute, Height: 148 cm, Weight: 42 kg. Mouth opening adequate but due to large tongue when pt opens mouth tongue comes out. MPG gr IV, tongue, bluish in color present since birth. Neck extension is normal. Thyro mental distance 7 cm. Cardiac examinations reveal no abnormality.

All investigation found to be normal including bleeding profile.

It is planned for surgical resection i.e. partial glossectomy



ANAESTHESIA PLAN

The first challenging confrontation in treatment of the patient was airway management and selection of the type of anesthesia. We prepare all air way gadgets like bougie, light wand, fiberoptic device and keep surgeon ready for emergency tracheostomy.

Three options are planned, awake fiber optic intubation, light wand guided intubation, tracheostomy.

The patient kept NPO 8hr prior to surgery. And given anxiolytics in form of tablet alprazolam 0.5mg night before and inj midazolam 2mg IV before entering OT. Antisialagogue given in form of inj glycopyrrolate. Lignocaine gargule given 10 min prior to anaesthetize mouth and pharynx.

ECG, NIBP, Pulse Oximeter attached and provision to measure EtCO₂ kept ready.

In OT, nasal cavity anaesthetize with cotton soaked with lignocaine. Then the posterior pharynx was anesthetized with 3 intra-oral sprays using 10% lidocaine (Xylocaine 10%) oral spray. Larynx anaesthetize by sup laryngeal nerve block in greater cornu of hyoid. Trachea anaesthetized with transtracheal injection of lidocaine 2% through cricothyroid membrane.

After giving inj fentanyl 75 microgm (1.5mcg/kg). Propofol 2% given in incremental dose till patient deeply sedated, keeping spontaneous respiration intact. After initiation of sedation, patient intermittently breathed 100% oxygen via a facemask at any interval.

Nasal Fiber optic intubation tried with 7 mm flexometallic tube. As fiberoptic bronchoscope negotiated to pharynx there is continuous trickling

of blood making the vision near impossible even with repeated suction.

Then, we go for our backup plan i.e. using lightwand before taking more drastic measures like tracheostomy.

We found a relatively fair central, clear and bright transillumination on the cricothyroid membrane in trachea and able to secure airway as light wand does not need vision but an illumination. The correct placement of the endotracheal tube was confirmed by chest auscultation and Et CO₂. The tube was fixed securely with the help of a tape. The anaesthesia was maintained with 40:60 O₂: N₂O, inj. Vecuronium bromide and halothane.

DISCUSSION

Congenital hemangiomas appear in neck and head in 56–60% of cases, and those that appear in the oral cavity are generally located in the tongue (affecting it partially or totally), lips, under the tongue or the palate. Lingual hemangiomas pose distressing problems to the patients, producing cosmetic deformity, recurrent hemorrhage, and functional problems with speaking, deglutition, and mastication.⁽³⁾

Congenital hemangiomas are more common in female patients. It need partial or total glossectomy with flap coverage.

Air way management with an oral vascular tumor is really a challenge for anesthesiologist even with expert hand.

Fiber optic bronchoscopy guided intubation is best method for this type scenario as intubation is done with direct visualization of airway. Moreover fiber optic intubation needs expertise, experience and a

clear non traumatised airway. Blood and secretion made fiber optic intubation difficult and sometime impossible. As we are not very experienced with fiber optic device it is not possible for us to intubate this patient with a bleeding airway.

Light wand is a safe, effective and rapid technique for oral as well as nasal intubation in patients with difficult airway and in patients in which minimal neck movements are desired, such as in patients with cervical spine injuries. It can be used in both awake and apnoeic patients. It does not require the mandibular support as required in direct laryngoscopy so the chance of compression of tongue and injury not there. The light wand can be used in patients with limited mouth opening and abnormal airway^(4,5,6). Light wand also associated with less hemodynamic changes than fiberoptic intubation.⁽⁷⁾

To conclude, the light wand can be very useful device for tracheal intubation in patients with airway trauma. Life saving tracheal intubations can be performed smoothly and rapidly. This makes it an ideal device to be used routinely in our operation theater.

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