

Anesthetic and Airway Management of Post Burn Microstomia: A Case Report

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Abstract

Anesthetic and airway management of microstomia patients is challenging for anesthesiologists and requires special care and preparation during intubation and extubation.

Back up plan with other airway management equipment's should be available at hand before dealing with these patients, Decision of extubation is crucial and senior anesthetist should be available in the operating room. In case of prolonged surgery elective ventilation should be done in these cases.

Keywords: Anesthetic; Difficult; airway; Post burn; One contract.

Introduction

Microstomia- "Congenital or acquired reduction in the size of oral aperture" that leads to compromise in cosmesis, nutrition and quality of life. Most common cause in pediatric patient Oro facial burn. Air way management in micro stoma patient is challenging. We aim to describe the successful management of micro stomiafoc using on the challenges during nasotracheal intubation and extubation.

Case Report

A 6 year old Male patient admitted with history of or facial burn 1 year back, presented with complaint of post burn contracture over face and neck resulting in microstomia.

Preoperative assessment of the patient Weight-29kg, Height-107cm, average built No history of any chronic and congenital disease. On general examination Patient conscious, oriented, well hydrated, a febrile, HR- 89/min , BP- 128/76 mm Hg, SpO₂-99% on Room Air, with no active intra oral infection or pathology. Systemic examination revealed CVS examination: S1,S2 heard with no murmurs.

On neurological examination patient conscious oriented to time, place and person with GCS-15/15,Respiratory examination: B/L Air entry equal with no added sounds.

Airway examination shows mouth opening was less than one finger Fig 1 Mallampatti grading- can't be assessed because of burn contracture Thyromental distance: 4cm. Adequate nasal patency Slight restriction of neck movement Surgery planned was ontracture release and reconstruction.



Fig. 1: Mouth opening



Fig. 2: Glottic exposure on FOB



Anaesthesia Plan

Combined balanced General Anaesthesia Preparation
Nebulization with Topical lignocaine 4% Nasal instillation of oxymetazoline 0.1%, 2% lignocaine+ Adrenaline soaked cotton pellet placed in nasal cavity.

Premedicated with Inj. Glycopyrrolate 0.1mg iv, Inj Midazolam 1mg, IV Induction with Inj Propofol in titrated dose, Inj. Fentanyl iv 50mcg.

Intubation done under fiber optic guidance. Pediatric fiber optic loaded with endotracheal cuffed tube size 4.5mm ID After localization of epiglottis, fiber optic proceeded Tracheal scope position was confirmed, Oral Pack was inserted. tube was advanced position confirmed by bilateral chest rise & auscultation and EtCO₂ Anaesthesia Maintained with IV Atracurium, Isoflurane and 50% O₂+ air with Volume-Controlled mode of Ventilation.

Planned Extubation on table, oral pack removed under vision and under mild sedation and spontaneous respiration Guarded extubation done with ventilating bougie passed inside trachea. After extubation, laryngospasm noted EtCO₂ not recordable.

Immediately patient ventilated with 100% O₂ given with CPAP, Jaw Thrust, suctioning done, Deepened anesthesia with propofol, Larson's manoeuvre. Airway was collapsing dynamically- Re intubation trail given using 4.5 mm ID uncuffed tube intubation failed and then Nasopharyngeal endotracheal tube of 3.5mm ID passed through nostril. Saturation maintained >95% on manual ventilation Surgical Tracheostomy done.

Patient shifted to ICU for elective ventilation and management.

Discussion

Main Challenge for Anaesthesiologist: Securing airway.
In our case mask ventilation was difficult so nasopharyngeal catheter was used for mask ventilation. Use of LMA and oropharyngeal airway not possible-Restricted mouth opening. Blind nasal intubation avoided due to risk of bleeding and trauma Following the difficult airway algorithm of difficult airway society (DAS): Fiber optic wing chosen and proceeded. Difficult intubation anticipated surgical team on standby for tracheostomy During Extubation: episode of laryngospasm noted We followed difficult airway society (DAS) difficult extubation guideline "AT Risk" algorithm.

Conclusion

Anesthetic and airway management of microstomia patients is challenging for anesthesiologists and requires special care during intubation and extubation. Meticulous monitoring, adequate plane of anesthesia and avoidance of unnecessary airway manipulation is the key of successful anesthetic management. Surgical team should always be on standby for tracheostomy.

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