

Anesthetic concerns in a huge congenital sublingual swelling obscuring airway access

Nilesh Kumar,
Ashish Bindra¹,
Niraj Kumar¹,
Naveen Yadav,
Shilpa Sharma²

Departments of Anesthesiology,
¹Neuroanesthesiology, ²Pediatric
Surgery, Jai Prakash Narain Apex
Trauma Center, All India Institute of
Medical Sciences, New Delhi, India

Address for correspondence:

Dr. Ashish Bindra,
Department of Neuroanesthesiology,
All India Institute of Medical
Sciences, New Delhi - 110 029, India.
E-mail: dr_ashi2208@yahoo.com

ABSTRACT

Presence of intraoral pathology poses a great challenge during management of pediatric airway. We report management of big intraoral cystic swelling physically occupying the entire oral cavity restricting access to airway. Preintubation aspiration of swelling was done to decrease its size and make room for airway manipulation, followed by laryngoscopy and intubation in lateral position. Airway patency is at risk in postoperative period also, in this case, though the swelling decreased in size postoperatively but presence of significant edema required placement of tongue stitch and modified nasopharyngeal airway. Case report highlights simple maneuvers to manage a difficult case.

Key words: Huge, intraoral swelling, child, difficult airway, anesthesia, postoperative

BACKGROUND

Management of pediatric airway is a challenge in itself. Over it pathology involving upper airway poses its own set of difficulties. We report a case of big intraoral swelling physically occupying the entire oral cavity making anesthetic management noteworthy.

CASE REPORT

A 15 month, 14 kg, male child presented with large sublingual swelling completely obliterating oral cavity. [Figure 1] The swelling was small at birth and progressively enlarged over time. Local examination revealed huge swelling arising from ventrum of tongue pushing it towards palate. Child was only able to take liquids per os. Both nostrils were patent. Rest of the physical examination and blood reports were unremarkable. A provisional diagnosis of ranula was made. Surgical excision of cyst was

planned under general anesthesia. The swelling was huge, not allowing anything to pass over it so it was decided to aspirate it and make room for airway manipulation.

A difficult airway cart, tongue stitch and tracheostomy set was kept ready. Through 20 G intravenous line, child was premedicated with 50 µg glycopyrolate followed by intravenous ketamine (20mg) for sedation & analgesia. In order to prevent aspiration child was kept in left lateral position and 35 ml brownish fluid was aspirated which decreased the size of swelling. Laryngoscopy



Figure 1: Photograph of the child showing intraoral swelling occupying oral cavity.

Access this article online

Quick Response Code:



Website:

www.saudija.org

DOI:

10.4103/1658-354X.152888

in supine position was difficult so in lateral position, direct laryngoscopy was done with external laryngeal manipulation to visualize the vocal cords under deep inhalational anesthesia (oxygen & sevoflurane) and patient was intubated with 4.5 mm portex uncuffed tracheal tube. The tube was fixed after confirming bilateral equal air entry and atracurium 20 mg was given. Throat packing was done to prevent aspiration of secretions. Anesthesia was maintained with sevoflurane in oxygen and nitrous oxide. Twenty microgram fentanyl was given for analgesia and dexamethasone 2 mg intravenous was given to prevent airway edema.

Surgical excision of swelling with lining epithelium was accomplished successfully taking care not to injure the lingual nerve. Due to residual edema of tongue, airway patency looked threatened so a tongue stitch fixed to the chin and modified nasopharyngeal airway (a cut, size 4 mm uncuffed ETT with connector) was inserted. Patient was reversed (neostigmine and glycopyrolate) and extubated after adequate breathing efforts. Postoperatively, patient was conscious, maintaining saturation on room air and haemodynamically stable. Patient was closely observed for next 24 hours, modified nasopharyngeal airway was removed on 3rd post operative day and patient was discharged on 4th post operative day.

DISCUSSION

Difficult laryngoscopy is common in cases presenting with intraoral swelling, as they encroach and physically occupy the oral cavity making glottic visualization and maneuvering of endotracheal tube difficult. Various techniques are available to secure the airway in adults, but success and safety of these techniques in the paediatric age group with large oral swelling has not been established. Fiberoptic intubation is difficult in awake children, preliminary tracheostomy increases morbidity, blind nasal intubation carries the risk of bleeding and molar approach can be difficult in large intraoral swellings where molar space is compromised too. Excision under local anesthesia with monitored anesthesia care is not feasible and safe in children.

Aspiration of dermoid cyst prior to intubation has been reported to facilitate airway intervention^[3]. Aspiration of swelling in this case made it smaller and allowed the passage of laryngoscope blade. However rupture of swelling and aspiration of its contents during laryngoscopy should be

kept in mind. Gentle handling of the swelling and thorough throat packing specially when using uncuffed tube should minimize such complications.

Lateral positioning is known to decrease upper airway obstruction in awake as well as anesthetized individuals. Turning the child into lateral position allows the tongue to fall out of the mouth and clears airway obstruction^[1, 2]. For these reasons its commonly employed during recovery from anaesthesia. In our case lateral position was of great help for prevention of aspiration and visualizing glottis which was not possible in supine position.

Various modifications of normal endotracheal tube have been described in literature for its use as modified nasopharyngeal airway^[4]. Due to unavailability of smaller size nasopharyngeal airway cut endotracheal tube was used which served the purpose very well. It is particularly important as such swellings do not vanish in immediate postoperative period.

CONCLUSION

- Preintubation aspiration of intraoral swelling should be done to decrease its size whenever feasible.
- Lateral position should be preferred for aspiration, laryngoscopy, intubation and recovery.
- Postoperative edema of oral cavity and tongue should not be forgotten, tongue stitch and nasopharyngeal airway should be kept for atleast 48 hours postoperatively.

REFERENCES

1. Litman RS, Wake N, Chan Lai ML, McDonough J M, Sanghun Sin MS, Mahboubi S, Arens R. Effect of lateral positioning on upper airway size and morphology in sedated children. *Anesthesiology* 2005;103:484-8.
2. Walker RWM & Ellwood J. The Management of difficult intubation in children. *Pediatric Anesthesia* 2009;19 (Suppl 1):77-87.
3. Raveenthiran V, Sam CJ, Srinivasan SK. A simple approach to airway management for a giant sublingual dermoid cyst. *Can J Anesth* 2006;53:1265-6.
4. Mahajan R, Betz S, Meattie C. Simple tracheal tube – an alternative to the modified nasal trumpet. *Br J Anaesth* 2003;91:759-760.

How to cite this article: Kumar N, Bindra A, Kumar N, Yadav N, Sharma S. Anesthetic concerns in a huge congenital sublingual swelling obscuring airway access. *Saudi J Anaesth* 2015;9:202-3.

Source of Support: Nil, **Conflict of Interest:** None declared.