

Anaesthetic Consideration in an Infant with a Massive Congenital Ranula

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Sir,

Ranula derives its name from a Latin word 'rana' meaning a frog. It is an extravasated mucus pseudocyst arising from in the floor of the mouth from the sublingual glands^{1,2}. Large ranulas may compromise airway, lead to feeding difficulties and facial abnormalities³. We discuss the perioperative management of large congenital sublingual ranula with stressing on the difficulty in laryngoscopy and danger of rupture of the cyst leading to the spillage of the contents and bleeding.

A two months 3.5 Kg female posted for marsupialisation surgery for ranula. There was no significant perinatal history, no history of trauma no other evident congenital and systemic illness present. Presented with swelling in the floor since birth, gradually increasing in size. On examination normal tongue mobility, no extension to buccal and palate was observed. The overlying mucosa was translucent and not damaged. Computed tomography scan and magnetic resonance imaging documented a delineated a well-defined cystic lesion (3 x 2 x 3 cm) in the midline of the floor of mouth above the level of mylohyoid. All the blood investigations were normal. Patient was taken into Operating room after confirming fasting status and after taking informed and written consent from the parents. A difficult airway cart, tongue stitch and tracheostomy set was kept ready. An ENT surgeon was informed. Through intravenous line, child was premedicated with 0.01 mg/kg glycopyrolate followed by intravenous ketamine (2 mg/kg) 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. Anaesthesia was then

induced with oxygen and sevoflurane keeping the child in lateral position. With a spontaneously breathing neonate, in left lateral position, laryngoscopy was attempted with size 0 Miller blade which provided a glottic view and successfully trachea was intubated with size 3.5 uncuffed endotracheal tube, done by a senior consultant. To avoid aspiration of secretions and blood throat packing was done. Anaesthesia was maintained with oxygen, air and sevoflurane. Atracurium 0.5 mg/kg was administered intravenously. IV Fentanyl 2 mcg/kg and IV paracetamol 10-15 mg/kg were used for analgesia. Inj hydrocortisone IV (2.5 mg/kg) given to prevent airway edema and tongue stitch was fixed to the chin. At the end of the surgery, the neonate was successfully extubated. Postoperatively child was nebulised with Adrenaline (1: 10000) 6th hourly. Postanesthesia care unit course was uneventful.

Intraoral swelling may render direct laryngoscopy difficult as they encroach and occupy the oral cavity making glottic visualization and intubation difficult. While in adults various techniques are available to secure the airway with varied success; but safety profile and success of these techniques in the paediatric age group has not been established⁴. The use of a pediatric fiberoptic bronchoscope may seem prudent but is limited by availability and expertise, 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 too³. Excision under local anesthesia with monitored anesthesia care is not feasible and safe in children. The intraoral swelling also restricts the insertion of supraglottic airway devices. Sedation was avoided due

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Figure 1. Ranula occupying intraoral space.

to the risk of airway obstruction. Premedication with an antisialagogue was done to assist visualization during laryngoscopy. Inhalational induction was chosen as it provides the advantage of a spontaneously breathing neonate with sufficient anesthetic depth to carry out airway manipulations. Thus, aspiration of intraoral swelling contributes to ease in laryngoscopy, intubation, and surgical access and prevents rupture and spillage of contents. 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. Aspiration from cystic intraoral swelling should be done prior to intubation to decrease its size whenever possible. Lateral position should be preferred for intervention such as aspiration, laryngoscopy, intubation and recovery. Postoperative edema of oral cavity should be observed cautiously and tongue stitch should be kept for atleast 48 hours postoperatively.

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