Airway management in a case of large congenital ranula

Sir,

Congenital ranulas are retention cysts or pseudocysts arising from the floor of the mouth. As intraoral swellings, they present a unique challenge to secure airway in neonates due to difficulty in laryngoscopy and danger of rupture of the swelling leading to spillage of contents and bleeding.

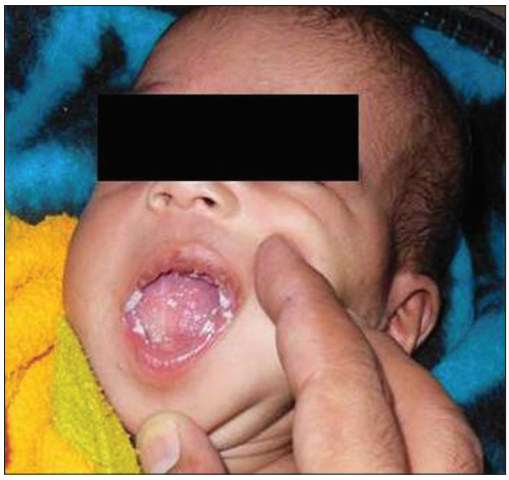

Figure 1: Swelling at floor of mouth

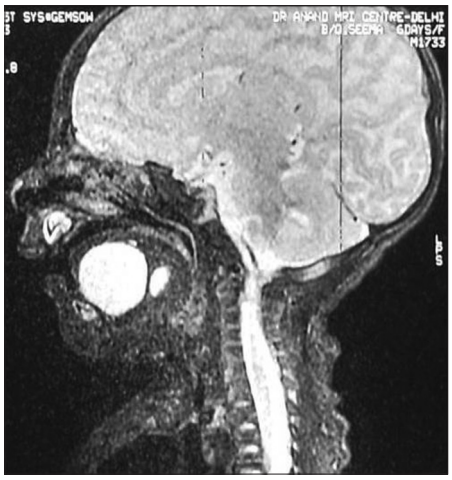

Figure 2: Magnetic resonance imaging scan – cystic lesion above mylohyoid with no extension

We describe a case of a large congenital ranula with a unique airway management.

A 20-day-old, 6 kg, neonate presented to the hospital with a large (3 cm × 3 cm) sublingual mass [Figure 1] present since birth and gradually increasing in size, with difficulty in feeding but no evidence of airway obstruction. Magnetic resonance imaging showed a well-defined cystic lesion [Figure 2], and a complete excision was planned.

An intravenous line was secured prior induction and 0.06 mg glycopyrrolate was given intravenously as premedication. Anesthesia was induced with oxygen and sevoflurane. With a spontaneously breathing neonate, laryngoscopy was attempted with size 0 Miller blade which failed to provide a glottic view. Prior another attempt at laryngoscopy, the contents of the swelling were aspirated with a 20-gauge cannula, which significantly reduced the size of the swelling.

Laryngoscopy was reattempted, this time successfully, and trachea intubated with size 3.5 uncuffed endotracheal tube.

Anesthesia was maintained with oxygen, nitrous oxide, and sevoflurane. Atracurium 3 mg was administered. Fentanyl and paracetamol were used for analgesia.

At the end of the surgery, the neonate was successfully extubated. Postanesthesia care unit course was uneventful.

Congenital ranulas may present as simple retention cysts lined by epithelial cells or as pseudocysts lined by granulation tissue following rupture of sublingual salivary gland and extravagation of contents. They are extremely rare with a reported incidence of 0.74%.[1] They pose a challenge to the anesthesiologist as securing the airway with conventional laryngoscopy is difficult with the added risk of rupture of swelling causing aspiration of contents and bleeding.

The aspiration of contents of an intraoral swelling before laryngoscopy has been described in the airway management of intraoral dermoid cysts.[2]

Ex utero intrapartum excision of congenital ranula has also been described in view of potential life-threatening airway compromise in the neonate.[3]

Retromolar approach to laryngoscopy and intubation may not be possible based on the location and size of the intraoral mass. The intraoral swelling also restricts the insertion of laryngeal mask airway. The use of a pediatric fiberoptic bronchoscope may seem prudent but is limited by availability and expertise.

Sedation was avoided due 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.[4]

Thus, aspiration of intraoral swelling contributes to ease in laryngoscopy, intubation, and surgical access and prevents rupture and spillage of contents.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published

and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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