

Anesthetic Management of a Newborn with Congenital Oral Mass of the Maxillary Alveolus

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Background

Congenital epulis is a benign granular cell tumor of the gingiva, arising from the alveolar ridge. Although rare, this benign oral tumor can cause significant obstruction of the airway and increased risk of aspiration, making surgical resection appropriate.¹ The anatomic obstruction poses a barrier to safe airway management, including mask ventilation and intubation. Given the urgency of intervention and limited preoperative imaging, anticipation of a difficult airway and coordination with the surgical team is necessary. Prior cases have shown general anesthesia and controlled airway management is successful in the management of congenital epulis, however, there is currently no standardized protocol in place.²

Case Presentation

Patient Factors: 1-day old full-term neonate (39 weeks via caesarean section)
PMH: pedunculated mucosal/submucosal lesion of the oral vestibule arising from the maxillary alveolus. Patient had feeding difficulty.

Anesthetic Management:

- Pre-Induction pre-established IV access secured. Monitoring with ECG, pulse oximeter, ETCO₂, non-invasive BP, and rectal temperature probe.
- Patient was pre-oxygenated and induction was initiated with Sevoflurane to keep the patient spontaneously breathing.
- Intubation was achieved uneventfully with GlideScope video-laryngoscopy followed by fiberoptic bronchoscopy to circumnavigate obstructing mass. Appropriate Cormack/Lehane view (grade 1) was achieved and a size 3 air cuff endotracheal tube was advanced without complications. Placement conformation was achieved with auscultation, equal chest expansion, and capnography. The ETT was secured with tape. Propofol and Rocuronium were administered after securing the airway.
- Emergence from anesthesia was uneventful following NMJB reversal. Patient did not require further resuscitation and recovered without incident in PACU.

Figures



Figure 1: One day old full-term neonate with congenital epulis of the alveolar ridge prior to surgical resection.

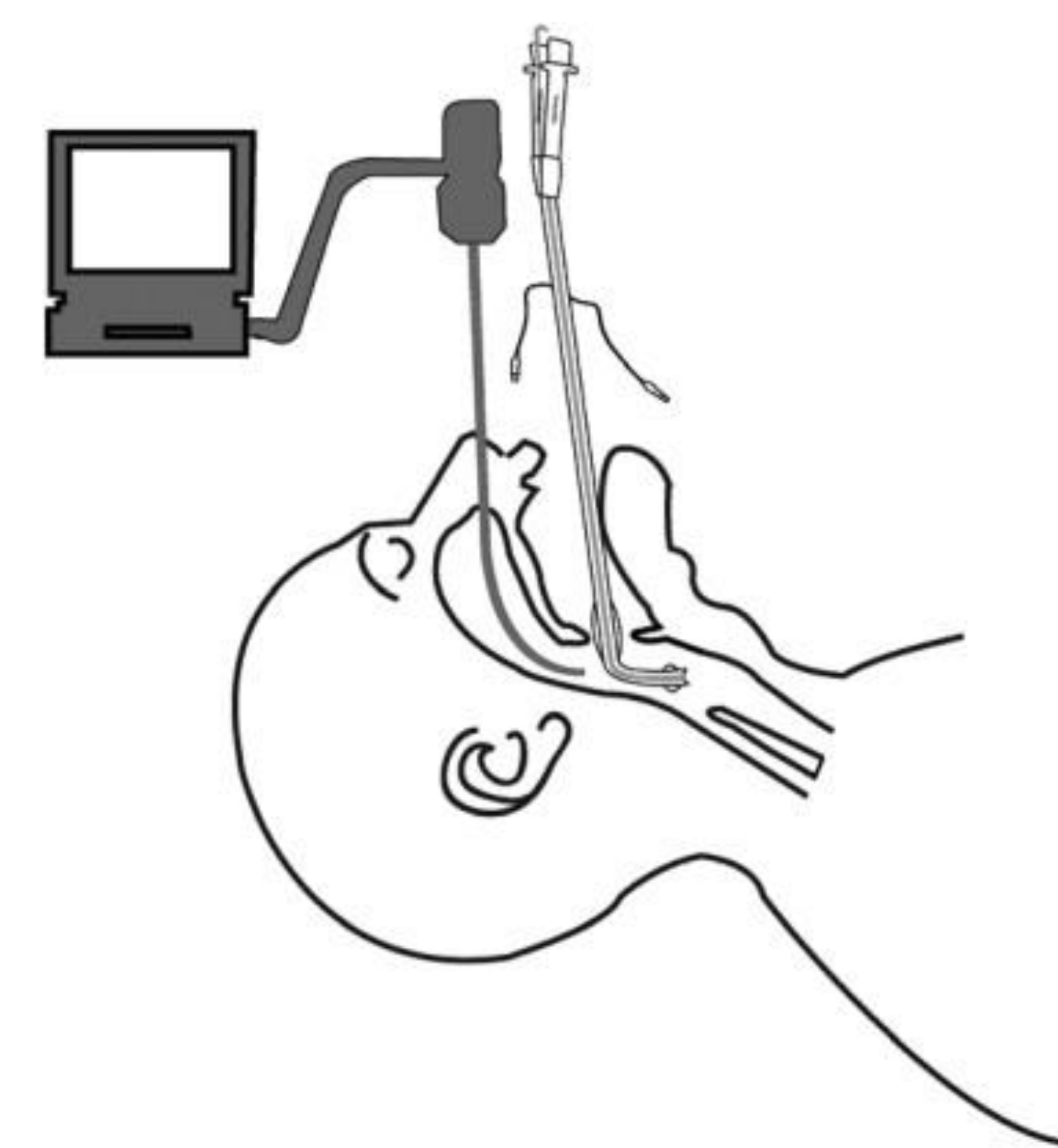


Figure 2: Schematic representation of GlideScope video-laryngoscopy and fiberoptic intubation.⁴



Figure 3: Fiberoptic Bronchoscopy view; Cormack/Lehane view (grade 1): full view of glottis

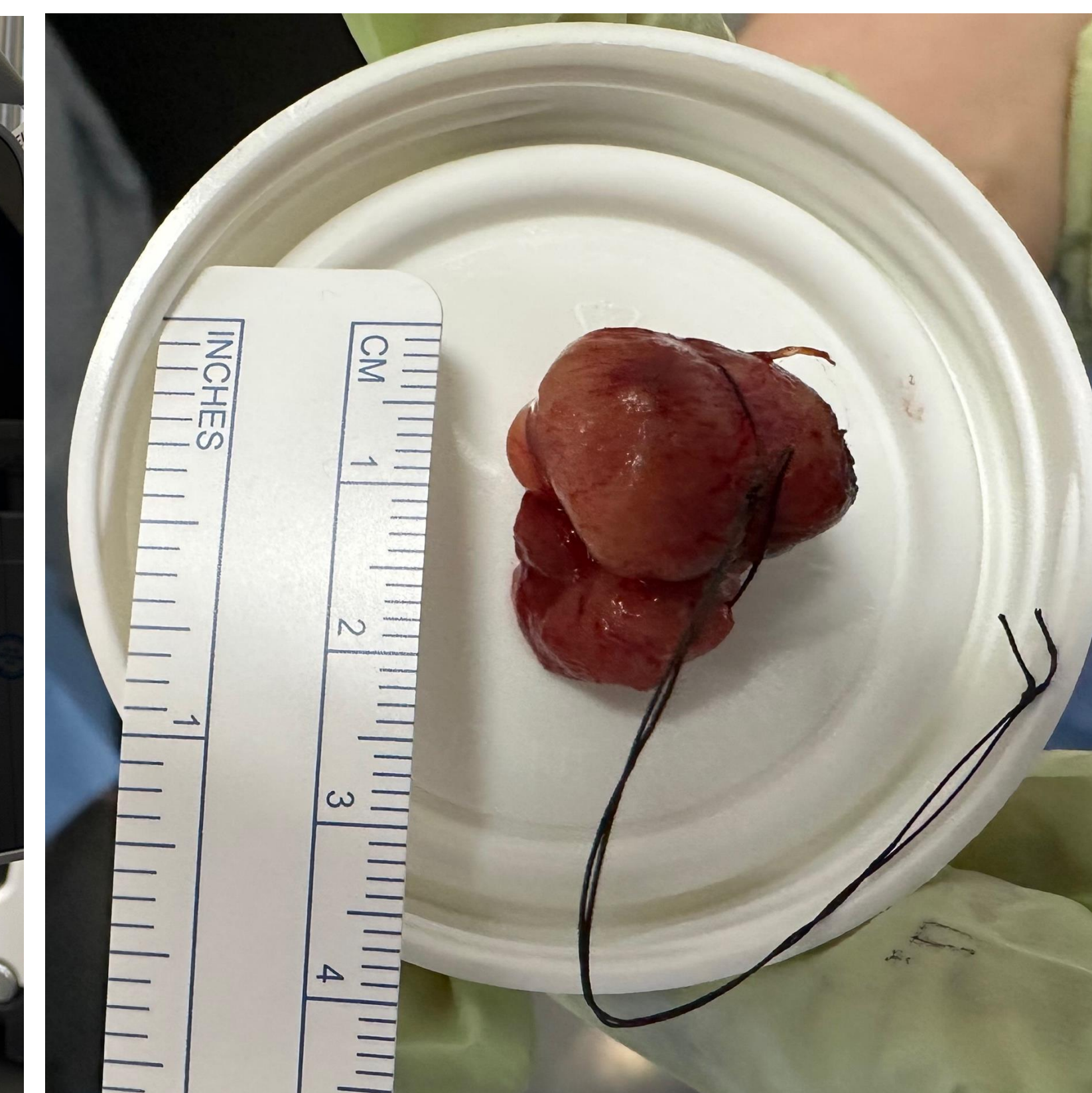


Figure 4: Resected congenital epulis mass. Measuring 2.2 cm x 2.0 cm.

Discussion

This case highlights the importance of airway management in the multidisciplinary approach to managing congenital airway anomalies. A pedunculated oral cavity mass can pose limitations to mask ventilation, laryngoscopy, and ET intubation. Previous case reports have shown that manual displacement of the mass improves visibility. However, mass characteristics must be taken into consideration. For example, lesions that are highly vascular may easily bleed with manipulation increasing the risk of aspiration or airway contamination.³ Some reported cases of congenital epulis have been complicated by failed intubation, in which it is important to be prepared for laryngeal mask airway. The patient's uneventful emergence and recovery support the safety and efficacy of the anesthesiology team's chosen approach. Our approach of using video-laryngoscopy followed by fiberoptic bronchoscopy can provide meaningful management strategies for future management of neonates with congenital oropharyngeal lesions.

References

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