

[NM-201] Laryngeal Mask Airway as a Transition to Endotracheal Intubation Performed with a GlideScope® in a Neonate with Treacher Collins Syndrome Outside of the Operating Room

Kriner J, Narayan P, Sukiasyan T, Wlody D  
Sunny Dmc , Brooklyn , NY, United states

---

**Introduction-**We report the successful use of a laryngeal mask airway (LMA) for resuscitation of a newborn with Treacher Collins Syndrome (TCS) and as a transition to endotracheal intubation. We also report the successful endotracheal intubation using a GlideScope® in the same patient after failed attempts of fiberoptic intubation (FOI) using a fiberoptic bronchoscope.

**Case Report-**A newborn with TCS was born via repeat elective cesarean section under combined spinal-epidural anesthesia at 37 weeks of gestation to a mother with a history of scleroderma and paternal history of TCS. The pregnancy and anesthetic course were otherwise uncomplicated.

The newborn was handed to the neonatologist and was placed under a radiant warmer, dried and briefly stimulated. Since spontaneous respiratory effort was absent, bag and mask ventilation with 100% FiO<sub>2</sub> was initiated. However, the ventilation was deemed to be ineffective. Due to bradycardia and ineffective ventilation, intubation was attempted via direct laryngoscopy (DL) using a conventional laryngoscope (Miller 0 blade). After unsuccessful intubation attempts bag and mask ventilation was continued, however still ineffective. Upon the anesthesiologist's suggestion, a size 1 LMA (Ambu® AuraOnce™) was obtained from the anesthesia cart and successfully inserted. This led to the establishment of effective ventilation: chest rise was observed, bilateral breath sounds were audible, and heart rate increased above 100.

Apgar scores were 1, 2, and 9 at 1, 5, and 10 minutes respectively and the patient weighed 2345 grams. The patient was transported to the Neonatal Intensive Care Unit (NICU) with the LMA in place.

In the NICU, intubation attempts by the ENT team using a fiberoptic bronchoscope were unsuccessful. Therefore, ventilation was continued with the use of an LMA. As soon as the pediatric anesthesiologist became available, laryngoscopy with a GlideScope® Cobalt blade 1 was attempted and revealed a Cormack-Lehane grade 1 view. An uncuffed endotracheal tube (ETT) size 3.5 was passed on the second attempt after adjusting the curvature of the stylet. Correct positioning of the ETT was confirmed with end-tidal CO<sub>2</sub> and a fiberoptic bronchoscope. Consequently, the ENT team in the NICU performed tracheostomy.

**Discussion-**TCS is a congenital disease resulting from malformation of the first and second brachial arches, leading to an array of mandibulo-facial anomalies. We illustrate the successful use of videolaryngoscopy (GlideScope® Cobalt) in NICU settings, when FOI attempts were not successful. We recommend videolaryngoscopy be strongly considered in neonates with a difficult airway. However, the superiority of one device over the other and feasibility in the neonatal population needs yet to be determined. A clear strategy on management of a neonatal difficult airway outside of the operating room needs to be developed for every institution.

---