

[NM-281] Airway Management of Patient After Sustaining Injury Secondary to Caustic Ingestion

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Roughly 5,000 to 15,000 caustic ingestion injuries occur every year in the United States with a peak occurrence between the ages of 1-5 years old (1). Ingestion of caustic substances causes damage both externally and internally which may present as a critical airway to the practitioner in both emergent and non-emergent settings.

We present a two year old female admitted in respiratory distress with a history of caustic ingestion 10 months prior. She had significant damage to the peri-oral structures, oropharynx, glottic structures and esophagus and was to undergo colonic interposition surgery in order to replace the esophagus, which had completely stenosed. Prior to this she underwent endoscopy for which she was intubated, a task that was exceedingly difficult, requiring many attempts. Direct laryngoscopy was not possible due to limited mouth opening, nor was use of a glide scope. ENT was called to perform rigid laryngoscopy and passed a 3.0-cuffed endotracheal tube with fiber optic assistance. Following this the patient returned to the OR for direct laryngoscopy and lysis of adhesions involving glottic structures and the epiglottis. The epiglottis itself was fixed and misshapen. She was extubated 2 days after this intervention in the pediatric intensive care unit and discharged home.

She returned two weeks later for colonic interposition. Airway management again presented a challenge, despite the interventions that had been performed by ENT. Limited mouth opening was the major barrier, preventing even passage of an intubating LMA. The airway was secured nasally with a flexible fiber optic scope passed through a split nasal trumpet to guide the scope, a technique which is not described in the literature. The patient was again successfully extubated in the pediatric ICU 2 days post operatively. She remained in the hospital for weeks afterwards requiring follow up barium studies of the neo-esophagus as well as interventions such as placement of a broviac catheter. Each study and procedure was an opportunity for the patient to aspirate or for the airway to be lost.

This case presents an opportunity for discussion of the “chronically” critical airway and the possible interventions that may be undertaken to manage these patients. Some reviews of these patients suggest tracheostomy for long term management while others suggest reconstructive surgery involving not only the esophagus but also the oral opening and tongue (2,3).

References:

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3. Ichioka S, Nakatsuka T, Minegishi Y, Asato H, Takato T, Haril K. Microsurgical reconstruction for caustic injuries of the oral cavity and esophagus. *J Reconstr Microsurg*. 2000; 16 (5): 357-361.


