

Subglottic Cysts in a Premature Infant: A Rare Complication of Prolonged Intubation

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Abstract

Subglottic cysts are a rare cause of respiratory distress in infants. The primary risk factors for subglottic cyst formation are prematurity, low birth weight, and prolonged intubation. Therefore, early recognition and treatment are essential to prevent potentially fatal airway obstruction.

Case Presentation

A former 24-week, 640 grams premature female infant presented at ten months for evaluation of stridor. She was intubated at delivery with a 2.5 uncuffed endotracheal tube and remained intubated for more than 40 days. Her stridor developed around eight months worsened with agitation and supine positioning and improved sitting. Subglottic pathology was suspected, including stenosis, edema, or cysts.

Operative evaluation using tracheobronchoscopy was performed. Total intravenous anesthesia, topicalization of the vocal cords, and spontaneous respirations without intubation were conducted. Airway examination revealed three subglottic cysts resulting in 90% obstruction (Figure 1, Figure 2). Endoscopic marsupialization with microscissors resulted in improvement in airway diameter (Figure 3, Figure 4). Postoperatively, the patient was observed in the Intensive Care Unit and was then discharged home after 24 hours. One year later, she remains free of respiratory symptoms.

Subglottic cysts are a rare complication of endotracheal intubation, and symptoms may not present for months following extubation, likely due to continued cyst growth [1,2]. Clinical presentation can be nonspecific, including generalized respiratory symptoms and failure to thrive 2. Surgical evaluation is diagnostic and allows for therapeutic intervention, with cyst marsupialization being the standard of care [2]. Prompt diagnosis and treatment can be lifesaving.

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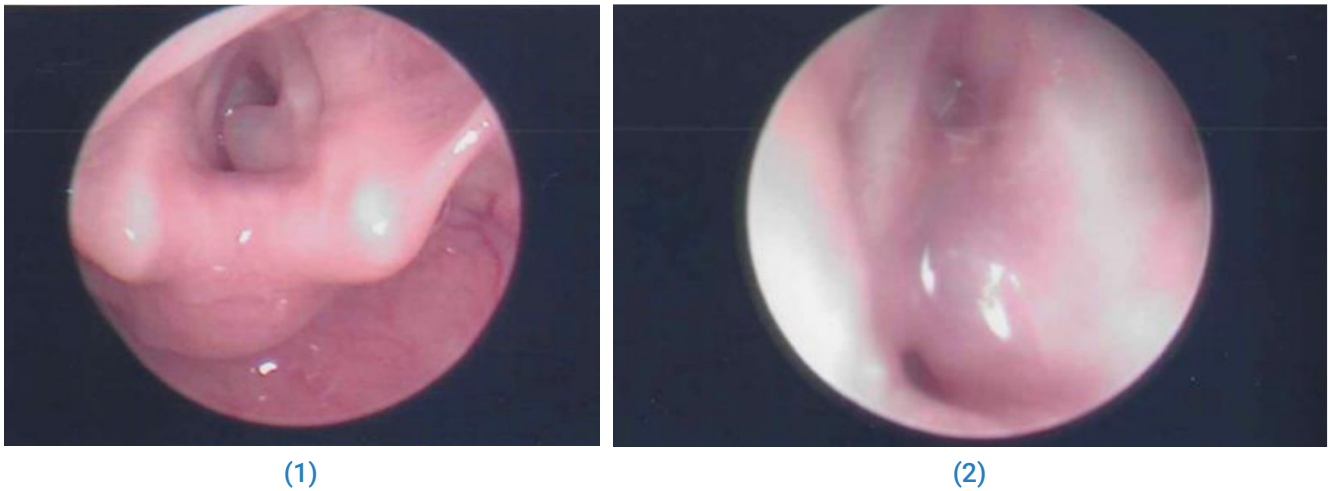


Figure 1 and 2: Airway examination revealed three subglottic cysts resulting in 90% obstruction.

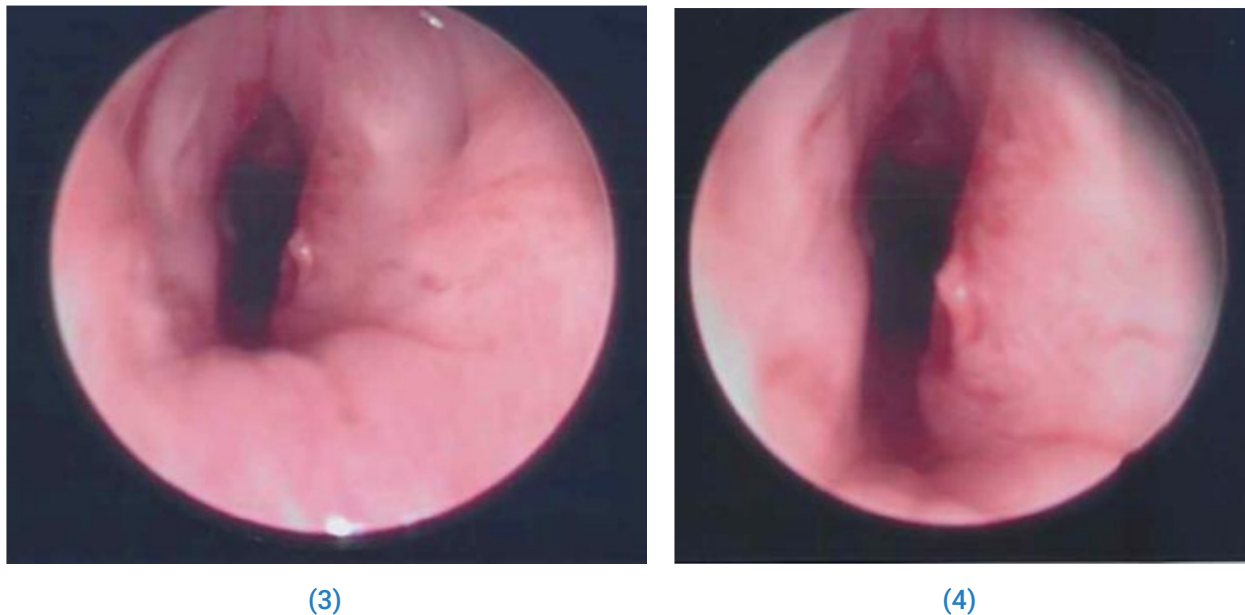


Figure 3 and 4: Endoscopic resection resulted in significant improvement in airway diameter.

Consent: Written informed consent was obtained from patient's parent according to institutional policy.

Prior Presentations: Virtual poster presentation at the Society for Pediatric Anesthesia Annual Meeting, February 2021.

Conflict of Interest

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. Informed consent was obtained for this publication.

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