

# Split Larynx

Ashish Bindra, M.D., D.M., Sharmishtha Pathak, M.D., Kapil Sikka, M.S.



A 30-YEAR-OLD male, intubated due to respiratory distress after cervical spine injury, required endotracheal tube exchange due to high airway pressures. In this unique laryngoscopic video (C-MAC; Karl Storz-Endoscope, Germany) view, the glottis seems to be split into an anterior triangular and a posterior circular portion secondary to the presence of bilateral vocal cord granulomas. The posterior portion may be mistaken for the esophageal inlet, and attempts to insert the endotracheal tube into the smaller anterior portion can result in trauma and complicate airway management.

Granulomas are soft, lobulated, benign masses usually found on the arytenoids due to perichondral inflammation after traumatic or prolonged intubation, oversized endotracheal tube, excessive cuff pressure, and/or laryngopharyngeal reflux.<sup>1</sup> Airway management is challenging, since proper identification of the laryngeal inlet is made difficult by the altered anatomy. On laryngoscopy, visualizing tracheal rings in the subglottic area gives a clue that the view is tracheal rather than esophageal. Repeated attempts to place the endotracheal tube either anteriorly or posteriorly should be avoided since the laryngeal cavity is not actually split. Liberal airway anesthesia, flexible bronchoscopy, and a smaller sized endotracheal tube may help to navigate beyond the lesion in fewer attempts without causing undue trauma, bleeding, or airway obstruction.<sup>2,3</sup> Extubation should be attempted cautiously, with large granulomas causing stridor and respiratory distress. Smaller granulomas may present

innocuously with hoarseness and voice changes postoperatively. Management is essentially conservative and involves removal of the irritant or causative factor, antireflux therapy, and steroids. Most granulomas spontaneously decrease in size and resolve in 4 to 6 weeks. Surgical treatment can be offered with otorhinolaryngology consultation in unresolving lesions.

## Competing Interests

The authors declare no competing interests.

## Correspondence

Address correspondence to Dr. Bindra: dr\_ashi2208@yahoo.com

## References

1. Kaneda N, Goto R, Ishijima S, Kawakami S, Park K, Shima Y: Laryngeal granuloma caused by short-term endotracheal intubation. *ANESTHESIOLOGY* 1999; 90:1482–3
2. Sadoughi B, Rickert SM, Sulica L: Granulomas of the membranous vocal fold after intubation and other airway instrumentation. *Laryngoscope* 2019; 129:441–7
3. Nakahira J, Sawai T, Matsunami S, Minami T: Worst-case scenario intubation of laryngeal granuloma: A case report. *BMC Res Notes* 2014; 7:74

From the Department of Neuroanaesthesiology and Critical Care, All India Institute of Medical Sciences, New Delhi, India.

Copyright © 2019, the American Society of Anesthesiologists, Inc. All Rights Reserved. *Anesthesiology* 2019; 131:1152. DOI: 10.1097/ALN.0000000000002867