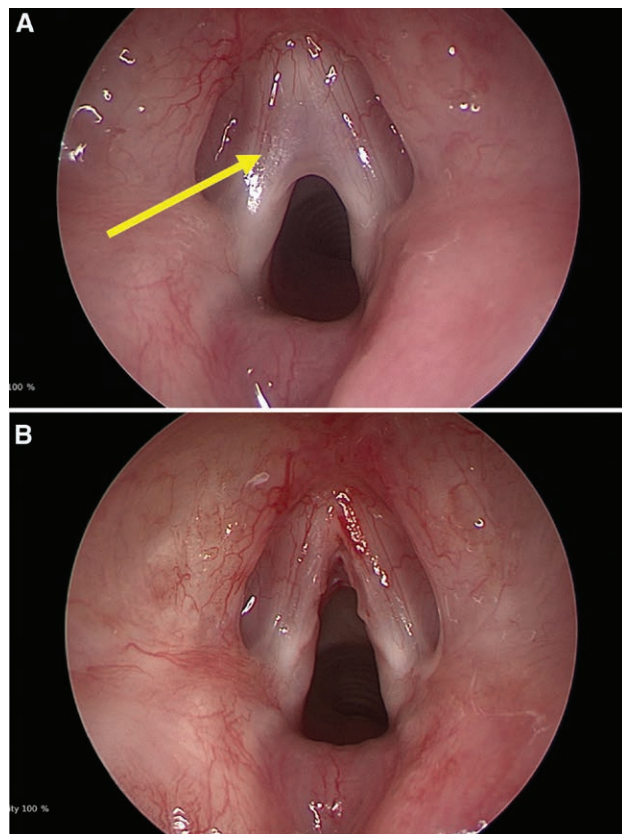


Glottic Web

An Abnormal Cry for Help

T. Wesley Templeton, M.D., Eleanor P. Kiell, M.D., Ashley S. Hodges, M.D., Torrey L. Fourrier, M.D.



A glottic web is a rare congenital malformation (1:10,000) that results from failure of epithelial layer resorption at the laryngotracheal groove leading to the formation of a membranous connection between the vocal folds (panel A, yellow arrow).¹ Infants will frequently exhibit symptoms early in life, including stridor or an abnormal cry.¹

Before diagnosis, a glottic web may be missed during initial elective airway management if clinicians are unsuspecting. Typically, it appears as a blunting of the normally sharp angle between the vocal folds. This is illustrated in the comparison of panels A and B, where panel B demonstrates a more normal appearing glottis after repair of the web in panel A.

Because it shrinks the size of the glottic opening, a glottic web will make intubation difficult or in some cases impossible. Once diagnosed in a nonemergent setting and mask ventilation is effective, airway management should ideally be undertaken using a technique that does not directly instrument the glottis if there is no contraindication. Further, an otolaryngologist and advanced airway equipment should be made available should urgent tracheostomy become necessary.^{1,2} The patient may also benefit from intravenous steroids to reduce airway swelling. If the infant is intubated, great caution and collaboration with an otolaryngologist should be undertaken when considering extubation because even modest glottic swelling can lead to significant respiratory embarrassment. In an infant in extremis, where the web occludes 75% or more of the glottic opening, intubation is likely to be impossible and the patient will require a surgical airway.³

Competing Interests

The authors declare no competing interests.

Correspondence

Address correspondence to Dr. Templeton: ttemplet@wakehealth.edu

References

1. Gupta A, Gupta N: Anterior laryngeal web leading to unanticipated difficult tracheal intubation in a neonate diagnosed and managed successfully with CMAC video laryngoscope: A case report. *AA Pract* 2018; 10:28–30
2. Rai SK, Holler T, Propst EJ, Wolter NE, Amin R: Tracheostomy care: Clinical practice patterns of pediatric otolaryngologists-head and neck surgeons in a publicly funded (Canadian) health care system. *Int J Pediatr Otorhinolaryngol* 2018; 115:177–80
3. Mahfouz AK, Rashid M, Reddy P: Anaesthetic management of congenital laryngeal web presenting with acute upper airway obstruction. *Middle East J Anaesthesiol* 2010; 20:719–21

Published online first on January 29, 2020. From the Department of Anesthesiology (T.W.T., A.S.H.) and Department of Otolaryngology and Head and Neck Surgery (E.P.K., T.L.F.), Wake Forest School of Medicine, Winston-Salem, North Carolina.

Copyright © 2020, the American Society of Anesthesiologists, Inc. All Rights Reserved. *Anesthesiology* 2020; 132:1237. DOI: 10.1097/ALN.0000000000003163