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Reinke's Edema

Implications for Airway Management

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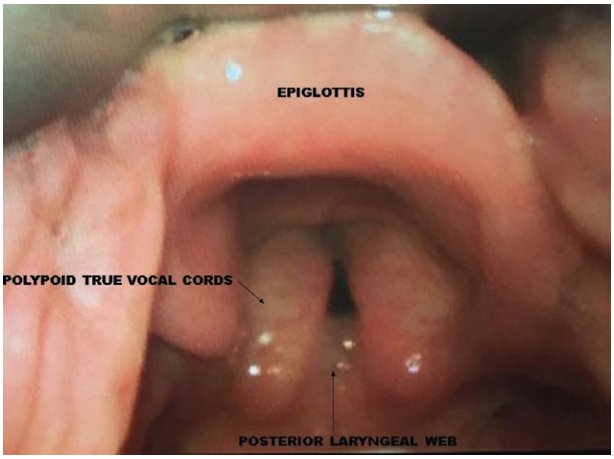

REINKE'S edema is a benign laryngeal disease that is associated with chronic tobacco abuse and gastroesophageal reflux disease. Chronic irritation from smoking and acid reflux increases capillary permeability, leading to edema and polypoid degeneration of the true vocal cords. This causes the vocal cords to appear swollen and translucent (image). Rarely can an acquired laryngeal web be appreciated in this condition (image). Clinical features include dysphonia and hoarseness of voice.[1,2] Nonspecific clinical features necessitate a high index of suspicion for presence of Reinke's edema.

Anesthesiologists should be aware of this condition as it may complicate airway management. Reinke's edema often narrows the glottic aperture. Laryngeal webs worsen such narrowing, hindering tracheal tube passage. Smaller sized endotracheal tubes may be needed to achieve intubation.[2] Delivery of positive pressure ventilation through a supraglottic device may be impeded by bowing of edematous cords and resultant glottic obstruction. This can be erroneously attributed to device malpositioning or laryngospasm. Fiberoptic examination through the device helps delineate the cause.[3] Preexisting Reinke's edema contributes to worsening laryngeal edema in certain circumstances, such as surgery in the prone or Trendelenburg position and excessive fluid administration. Before extubation, such patients benefit from assessment of degree of laryngeal edema *via* direct or videolaryngoscopy, and a quantitative cuff leak test. Although controversial, a positive quantitative cuff leak test indicates heightened possibility of postextubation stridor. Considerations in such patients include extubating over an airway exchange catheter or postponing extubation until edema subsides. Intravenous steroids help decrease inflammatory edema.

Competing Interests

The authors declare no competing interests.

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References

1. Cortegiani A, Russotto V, Palmeri C, Raineri SM, Giarratano A: Previously undiagnosed Reinke edema as a cause of immediate postextubation inspiratory stridor. A A Case Rep 2015; 4:1–3
2. Basaranoglu G, Erden V, Kokten N, Verim A, Isikci Y, Saitoglu L: Laryngeal web as a result of Reinke's oedema: A cause of difficult endotracheal intubation. Br J Anaesth 2006; 96:406–7
3. d'Hulst D, Butterworth J, Dale S, Oaks T, Matthews B: Polypoid hyperplasia of the larynx misdiagnosed as a malpositioned laryngeal mask airway. Anesth Analg 2004; 99:1570–2

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