

# **Bacterial Tracheitis: a case of severe upper airway obstruction in a previously healthy adult female**

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## **Background**

Bacterial tracheitis is a condition often associated with infection in young children, where it is well recognized as a cause of upper airway obstruction (1). In adults, however, tracheitis is a much rarer presentation and is less commonly considered in the differential diagnosis of stridor. Previous case reports in immunocompetent hosts have demonstrated mild infections treatable with antibiotics. More complicated presentations have been described in immunocompromised patients (2,3). Only one case has been previously described in an otherwise well patient who required mechanical ventilation, which was in the context of pregnancy (4).

## **Objectives**

This case reviews an immunocompetent patient presenting to hospital with stridor secondary to severe bacterial tracheitis causing critical airway obstruction requiring mechanical ventilation. It highlights challenges in diagnosis and strategies for management.

## **Methods**

A review of the literature was performed of Medline, Embase and Cochrane to identify previously published cases. Chart review and case report was completed on the patient's presentation in collaboration with the multidisciplinary team managing their care. Patient consent was obtained and the project was approved by the Queen's University Health Sciences Research Ethics Board.

## **Results/Case**

A 75-year-old, immunocompetent patient presented to hospital with acute dyspnea developing over 7 days, on the background of mild dyspnea on exertion over the previous 4 months. Significant increase in work of breathing as well as stridor suggested upper airway obstruction, however laryngoscopy demonstrated normal epiglottis and supraglottic airway. Further laryngoscopy by ENT demonstrated severe subglottic stenosis and urgent intubation was planned in collaboration with anesthesia and ENT. The patient was successfully intubated with Glidescope and a 5.0 microlaryngoscopy tube. Bronchoscopy demonstrated edema of the trachea which extended 5cm requiring deep insertion of the endotracheal tube. The patient was treated with ceftriaxone and azithromycin for community acquired bacterial tracheitis and extubated after 7 days.

## **Discussion**

Upper airway obstruction is an airway emergency requiring rapid assessment and management. Diagnosis with laryngoscopy considering both the supra- and subglottic airways is essential. Early involvement of anesthesia and ENT is important for timely intervention. Awake intubation in the OR is recommended with tracheostomy setup available.

Bacterial tracheitis is a rare but important diagnosis to include on the differential for upper airway obstruction in otherwise healthy patients.

### References

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