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Title: An Unexpected Diagnosis: Renal Cell Carcinoma Presenting as a Tracheal Mass

Body: Background: Renal cell carcinoma (RCC) accounts for 2-3% of adult malignancies, with common metastases to the lungs, bones, liver, and brain. Tracheal metastases are exceedingly rare, with only five documented cases in a 40-year meta-analysis and a single case report in 2017. We present a proximal tracheal mass with ball-valving airway obstruction, diagnosed as metastatic RCC eight years post-nephrectomy.

Methods: During otolaryngology consultation for stridor, a symptomatic tracheal mass was identified upon flexible laryngoscopy, raising concern for dynamic airway obstruction (inspiration: ~95% CSA; expiration: 70% CSA). Initial suspicion favored a post-intubation granuloma given its pedunculated nature and surgical history. THRIVE (OptiFlow, Fisher & Paykel) oxygenation was used for induction, enabling suspension laryngoscopy and immediate resection without intubation. Due to lesion mobility, hybrid cold steel–CO_2 laser resection was performed rapidly, restoring airway patency without tracheostomy or extended intubation.

Results: Histopathology confirmed clear cell RCC (PAX8, AE1/A3, CAIX positive) with negative 4-mm margins. The patient had immediate symptom resolution, and three-month surveillance showed no recurrence.

Conclusion: This case underscores the importance of ≥5-year RCC surveillance, the role of advanced oxygenation strategies (THRIVE), and the utility of hybrid cold steel–laser resection in dynamic tracheal obstructions.

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