Idiopathic Bilateral Vocal Cord Paralysis: A Diagnosis ofExclusion

P. Przydzial, M. Zales, T. Majumdar; Newark Beth Israel Medical Center, Newark, NJ, United States.

Introduction: Vocal cord paralysis causing airway compromise lies within the broad differential diagnosis for causes of acute respiratory failure. With bilateral paralysis, the differential narrows. Although many times the cause of bilateral vocal cord paralysis (BVCP) is idiopathic, reported etiologies include traumatic denervation from neck surgery or tracheal intubation, neurological diseases, malignancy, and infection. We describe a case of idiopathic BVCP presenting with severe respiratory distress necessitating ICU admission. Case Report: A 61-year-old male presented to our hospital with complaints of hoarseness, stridor and worsening dyspnea. Past medical history was significant for BVCP of unknown etiology, requiring prolonged intubation at an outside hospital. Further review of outside medical records revealed a history of delirium, facial nerve paralysis, worsening dysphonia, dysphagia, and Parkinsonian-like features. Prior CT neck revealed enlargement of bilateral vocal cords and numerous prominent cervical lymph nodes. Extensive investigation was done including MRI brain, lumbar puncture, EEG and paraneoplastic workup, all of which were inconclusive. ENT interventions included suture arytenoidopexy, botox injection of laryngeal muscles, triamcinolone acetonide injections, and vocal cord biopsy showing post-intubation granulation tissue. Respiratory status during previous admission improved with steroid treatment and patient was discharged home. On arrival at our ED, patient required immediate attention for severe respiratory distress with stridor and drooling. He was urgently intubated for airway protection and admitted to the ICU for ventilator management. After consulting with patient, family, neurology and ENT teams, the decision was made for early tracheostomy given the patient’s high risk for prolonged intubation and subsequent complications, such as tracheomalacia, ventilator-associated pneumonia, and ventilator-dependent respiratory failure. Throughout his course, malignancy, mechanical vocal cord trauma, common neurological pathologies including medullary stroke, seizures, neurosarcoidosis, and infectious causes were all excluded. These findings prompted us to undertake a more targeted, specialized diagnostic approach. Our discussion will focus on the rare causes of BVCP, the strategies for diagnosis, and their implications in critical care medicine.

Conclusion: Bilateral vocal cord paralysis is among the rare causes of acute respiratory failure in the ICU. Idiopathic BVCP remains a diagnosis of exclusion. Early recognition of BVCP can prompt rapid intervention, circumventing the need for prolonged intubation, mechanical ventilation and the accompanying complications.

This abstract is funded by: None