

# Paradoxical Vocal Fold Motion Disorder in the Postanesthesia Care Unit

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A 57-yr-old female developed inspiratory stridor and suprasternal retractions in the postanesthesia care unit (PACU) after general endotracheal anesthesia. Paradoxical vocal fold motion disorder was diagnosed by transnasal flexible laryngoscopy. Image *A* shows the vocal cords when dysfunctional, *B* after treatment with an anxiolytic, and *C* when respiratory control therapy was provided by straw breathing, which resolved her symptoms.

Paradoxical vocal fold motion disorder is a cause of postoperative respiratory distress marked by desynchronized or paradoxical adduction of the vocal folds during inspiration or expiration. Patients typically present with inspiratory stridor and a sensation of airway restriction. Common symptoms also include choking, aphonia, or dysphonia and chronic cough. Paradoxical vocal fold motion disorder is commonly seen in patients with upper or lower motor neuron injury, movement disorder, conversion disorder, and gastroesophageal reflux. It may be triggered by stress, anxiety, exercise, perfumes, other strong odors, upper respiratory infections, and reflux.<sup>1</sup>

Definitive diagnosis requires flexible laryngoscopy after pulmonary causes and supraglottic obstruction have been excluded through examination and relevant imaging.<sup>2</sup> Paradoxical vocal fold motion disorder is distinguished from bilateral vocal cord paralysis by showing paradoxical vocal fold adduction on inspiration associated with inspiratory stridor during laryngoscopy. Unnecessary intubation or even tracheostomy can result from a missed diagnosis.<sup>1</sup>

A trial of therapy may begin immediately when paradoxical vocal fold motion disorder is suspected because

laryngoscopy may delay a life-threatening diagnosis. Inducing a slow rhythmic pattern of breathing is the cornerstone of treatment. Reassurance, anxiolytics, and having the patient inhale nasally and exhale slowly through pursed lips or a straw (straw breathing) are helpful treatments.<sup>3</sup> Corticosteroids and bronchodilators provide minimal improvement.

The transnasal flexible laryngoscopy for this patient and response to treatment can be viewed in Supplemental Digital Content (<http://links.lww.com/ALN/C536>).

## Acknowledgments

The authors thank Ruby Apigo, R.N., B.S.N., for assistance at the patient's bedside while acquiring images at University Hospital, San Antonio, Texas.

## Competing Interests

The authors declare no competing interests.

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From the University of Texas Health Science Center at San Antonio, San Antonio, Texas.

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