

Vocal cord dysfunction

Introduction

Vocal cord dysfunction (VCD) is a condition that closely mimics asthma but is caused by an inappropriate vocal cord response during inspiration and expiration.

Incidence of VCD is approximately 2-15% per year. Up to 30% of patients with refractory asthma have VCD and asthma. It is more prevalent in women.¹

VCD is an important differential diagnosis in patients who appear to fail on standard treatment for asthma. Such patients are frequently misdiagnosed, mismanaged and may have little response to maximal treatment for asthma.

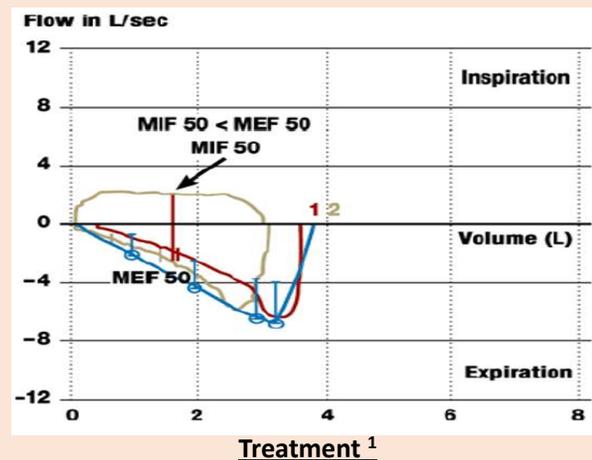
Suspicious case?

A high index of suspicion is needed to make the diagnosis when dealing with patients unresponsive to maximal treatment, or who present with seemingly brittle asthma.

The following symptoms hint towards the diagnosis

- Sudden onset dyspnoea
- Short duration of dyspnoea triggered by coughing or irritants
- Dyspnoea during inspiration
- Wheezing
- Feeling of constriction in the neck
- Asthma symptoms not always responsive to medication
- Lung function tests have been repeatedly normal
- Psychological stressors or psychiatric illness trigger symptoms
- Lightheadedness or dizziness

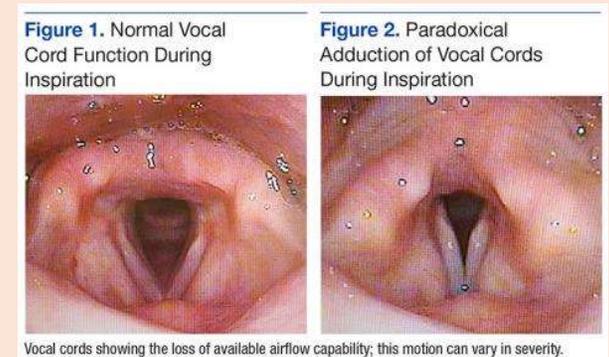
- Pulmonary function tests
Most patients will have undergone Pulmonary function test which has been repeatedly normal though one done during an attack may show a flattening of the inspiratory loop and $MIF_{50} < MEF_{50}$ ²



- Acute treatment of confirmed case involves calming the patient and reassuring them. Anxiety relief often relieves the laryngeal dysfunction. Improving oxygen delivery helps reduce the work of breathing and so reduces anxiety. Heliox and anxiolytics may be used as well.
- Chronic management involves speech therapy, psychological counselling and treatment of any underlying psychiatric conditions. Speech therapy involves manoeuvres that enhance opening of the vocal cords such as quick inhalation, pursed lip breathing and relaxed throat breathing with abdominal support

Investigations

- Flexible laryngoscopy
This is the gold standard for visualizing the vocal folds during an attack. A methacholine or irritant challenge can bring on an attack if needed.



Vocal cords showing the loss of available airflow capability; this motion can vary in severity.

References

1. Flavia CL, Hoyte MD; 2013; Vocal cord dysfunction; Immunology and Allergy Clinics of North America; 33(1); pp 1-22.
2. Kenn K and Hess M; 2008; Vocal Cord Dysfunction; *Deutsches Aerzteblatt Online*.
3. Clifford Nolt, MD Michael Ott, MD Ryann Ennis, MA, CCC-SLP Jose Roman, MD; 2017; One Hundred Case Series of Vocal Cord Dysfunction in a Military Treatment Facility; *Fed Pract.*; 34(3):pp28-33.