

VOCAL CORD DYSFUNCTION

(PARADOXICAL VOCAL FOLD MOVEMENT)

Vocal Cord Dysfunction (VCD), also commonly known as paradoxical vocal fold motion, can be characterized as an abnormal adduction of the vocal folds during the respiratory cycle (especially during the Inspiratory phase) that produces airflow obstruction at the level of the larynx.

VCD frequently mimics persistent asthma and is often treated with high-dosed inhaled or systemic corticosteroids, bronchodilators, multiple emergency department visits, hospitalizations, and, in some extreme cases, tracheostomies and intubation.

Suspect VCD in patients with asthma-like symptoms that do not respond to conventional asthma therapy or are induced by exercise or stress.

COMMON SYMPTOMS:

- ▶ Difficulty breathing, especially breathing air in
- ▶ A feeling of tightness in the throat
- ▶ Rapid shallow breathing
- ▶ A feeling of choking or suffocation
- ▶ Stridor (usually on inhalation)
- ▶ Intermittent Hoarseness
- ▶ Chronic cough and/or throat clearing

** these symptoms are a result of an abnormal closing of the vocal folds rather than inflammation of the airways (asthma).

TRIGGERS:

Often similar to asthma triggers and may include:

- ▶ Upper respiratory infections
- ▶ Indoor air pollution
- ▶ Strong odors or fumes
- ▶ Cigarette smoke
- ▶ Singing or shouting
- ▶ Laughing
- ▶ Stress, anxiety or any strong emotions
- ▶ Post-nasal drip
- ▶ Gastroesophageal Reflux Disease (GERD)
- ▶ Laryngopharyngeal Reflux Disease (LPRD)
- ▶ Cold air
- ▶ Exercise or physical activity

Based on symptoms of VCD, many people may be misdiagnosed with asthma and treated with asthma medications. Since it is not asthma, little or no

improvement is seen in symptoms. While it should be clear why a correct diagnosis of VCD is important, it is also critical to keep in mind that some people have both asthma and VCD.

DIAGNOSIS:

SPIROMETRY

- ▶ Breathing tests like spirometry can be useful in diagnosing VCD, but only if they are done when symptoms are occurring. In the absence of any other complicating condition like asthma, breathing tests for VCD will be normal.
- ▶ However, if spirometry is conducted when symptoms are present and if a "flow volume loop" is obtained, VCD will cause a flattening of the Inspiratory part of the loop.

METHACHOLINE PROVOCATION

- ▶ Can be misleading. Some research reports that patients with VCD show no bronchial hyperresponsiveness on methacholine challenge unless he/she has concomitant asthma. However, there is some research that shows it can induce acute attacks in patients with VCD and positive results may not reflect underlying reactive airway disease.

LARYNGOSCOPY

- ▶ Flexible laryngoscopy is considered the diagnostic standard for VCD. Direct observation of abnormal vocal fold movement toward midline during inspiration or expiration confirms diagnosis. Like spirometry it is important to perform when symptoms are present.

TREATMENT:

Medical management of associated conditions including asthma, reflux, and post-nasal drip is important. Referring a patient with to a speech-language pathologist is the cornerstone of treatment. The primary role is to teach the patient with VCD how to control the laryngeal area and maintain an adequate open airway during respiration.

At ENT Clinics of San Antonio, the speech pathologist's role extends to assessment, fiberoptic laryngoscopy, patient education, counseling, symptom management and voice therapy.

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