

## Inducible laryngeal obstruction (ILO)

**Clinical presentation** - female predominance

- Episodic dyspnea is the predominant complaint
- Other symptoms
  - Stridor predominantly during inspiration but can also occur during expiration or both
  - Throat tightness, choking sensation, dysphonia, cough, or dysphagia

Conditions that mimic or coexist with ILO include:

- Asthma (ILO is frequently mistaken for asthma because symptoms are episodic and both conditions share common triggers such as exercise)
- EDAC
- TM-TBM
- Laryngospasm commonly triggered by LPR/GERD or viral URI

Symptoms may be triggered or may occur spontaneously

- Triggers
  - Exercise
  - Irritants
    - GERD and rhinosinusitis
    - Inhaled
      - Cigarette smoke, ammonia, soldering fumes, cleaning chemicals, aerosolized machining fluids, construction dust, and others
  - Viral upper respiratory infection
  - Psychiatric disorders such as conversion or factitious disorder, anxiety, or depression
  - Clinically significant emotional stress
  - Cervical neurologic injury after thyroid and cervical spine surgery

## Diagnosis

- Laryngoscopy is essential to the diagnosis to demonstrate the closing of the vocal cords during inspiration and to exclude other diagnosis
  - If the patient is asymptomatic sniffing, phonation, coughing, throat clearing, swallowing, and Valsalva maneuver can be used to induce the vocal cord adduction during inspiration
- Pre and post bronchodilators spirometry
  - Should be performed for asthma evaluation
  - Flattening of the inspiratory loop of the flow-volume curve
    - It is supportive but can be seen in other conditions such as EDAC, TM, and others or could be due to suboptimal effort
- CT neck to exclude causes and dynamic CT neck can also be helpful

**Management** - It is often challenging and includes:

- Reassurance
- Breathing exercises (pursed lip exhalation, breathing through a straw)
- Speech and behavioral therapy, anxiolytics
- CPAP and inhaled helium-oxygen mixture have also been used in patients with severe respiratory distress, although data are limited to case reports only