Paradoxical Vocal Fold Motion

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Recommended Citation
Sherer, Stephen, "Paradoxical Vocal Fold Motion" (2015). Nursing Student Class Projects (Formerly MSN). 130.
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The presentation of vocal cord dysfunction is dependent on the individual. Common symptoms include: cough, hoarseness, throat and neck tightness, anxiety, choking, dysphagia, sighing, noisy breathing (stridor), frequent clearing of throat, and dyspnea (MacConnell and Danielson, 2014). Symptom of VCD, and asthma can often be misdiagnosed. In VCD the patient will often report the source of airway tightness in the neck or upper airway, and dysphonia is often reported in the chest (MacConnell and Danielson, 2014). It is important to note that VCD is on upper airway in origin, whereas asthma is more often associated with difficulty upon expiration (Deckert and Deckert, 2010). The sound of vocal cord dysfunction will present as an inspiratory monophonic wheeze, whereas asthma will cause a polyphonic wheeze (Merritt, 2015).

Signs and Symptoms

The presentation of vocal cord dysfunction is dependent on the individual. Common symptoms include: cough, hoarseness, throat and neck tightness, anxiety, choking, dysphagia, sighing, noisy breathing (stridor), frequent clearing of throat, and dyspnea (MacConnell and Danielson, 2014). Symptom of VCD and asthma can often be misdiagnosed. In VCD the patient will often report the source of airway tightness in the neck or upper airway, and dysphonia is often reported in the chest (MacConnell and Danielson, 2014). It is important to note that VCD is on upper airway in origin, whereas asthma is more often associated with difficulty upon expiration (Deckert and Deckert, 2010). The sound of vocal cord dysfunction will present as an inspiratory monophonic wheeze, whereas asthma will cause a polyphonic wheeze (Merritt, 2015).

Significance of pathophysiology

The significance of paradoxical vocal fold motion or VCD and its pathology have been found in its incidence, misdiagnosis, and emergency response. The incidence of VCD is estimated at 3% of the population with a female to male ratio of approximately 2:1 (Cohen, 2010). There is a significantly higher incidence in competitive athletes, high achievers, and healthcare professionals (Cohen, 2010). Another reason PVM is significant is that it can be misdiagnosed as asthma. PVM sufferers are often diagnosed with exercise induced asthma and unnecessary treatments like beta adrenergic agonists, corticosteroids, hospitalization, and mechanical ventilation occur (sometimes even tracheostomy placement). The appropriate diagnosis of PVM is commonly delayed by 5 to 10 years (Maccioni, Thompson, Chiang, Forrest, and Defilis, 2011). If healthcare providers were trained to recognize this diagnosis earlier, many unnecessary treatments could be avoided. In addition, more effective emergency treatments could be avoided as well. In anesthesia, anesthesiologists are often called to treat emergent airway situations like stridor. It is important to be able to recognize vocal cord dysfunction over other more common diagnoses causing stridor such as laryngospasm, laryngeal edema, and aspiration because treatments can range from using the commonly used device to tracheostomy (Neustein, Taitt-Wynter, and Rosenblatt, 2008).