Diagnosis of Paradoxical Vocal Fold Movement (Pvfm) In a 21-Year Old Female College Lacrosse Player: A Case Study

Itchkavich-Levasseur, M, & Barbato, C L : Springfield College, ATEP, Springfield, Massachusetts

Background: A 21-year-old female lacrosse player reported to the athletic training room complaining of shortness of breath. The patient stated that she thought she might be developing asthma. The patient was complaining of wheezing and coughing and difficulty breathing while exercising. Symptoms were not present during rest however. The patient’s physician prescribed her an Albuterol asthma inhaler. The patient stated that the inhaler was not working to control her breathing problems. She also indicated that she had more trouble breathing when taking the inhaler. Her medical history was not indicative of severe pulmonary pathology. The patient presented with no swollen lymph nodes, no deformity, and normal and equal breath sounds during both rest and exercise. **Differential Diagnosis:** Tracheomalacia, irritable larynx syndrome, exercise-induced asthma, thyroid tumors, and chronic obstructive pulmonary disease (COPD). **Treatment:** The patient was referred to a pulmonary specialist the following week. The patient received x-rays and MRIs of her chest. Both tests came back negative for any abnormalities. Next, an endoscopy was performed to evaluate the larynx. The results of the endoscopy showed that there was an abnormality within the vocal cords. A speech test was then performed to further evaluate the larynx. All of the tests were performed in a time span of just over one year. During this time, the patient continued to participate in college sports. The pulmonologist eventually diagnosed the patient with Paradoxical Vocal Fold Movement (PVFM). PVFM is a very rare breathing disorder that is often misdiagnosed as asthma. The disorder is characterized by adduction of the vocal folds during inspiration resulting in labored breathing. The pulmonologist cleared the patient to for full activity. The patient continued a rehabilitation program on her own. The rehabilitation program consisted of larynx relaxation techniques and practicing proper breathing techniques while talking and exercising. **Uniqueness:** PVFM is often misdiagnosed as asthma due to the similarities in symptoms. Very little research exists on the topic of PVFM, therefore the disorder is somewhat misunderstood. In extreme cases, airway intervention is necessary. This case was considerably milder. PVFM attacks are often triggered by exercise or periods of stress. The disease is approximately 4 times more prevalent in females than in males. Numerous cases have been documented in males however, and in the male population, PVFM is often observed in conjunction with asthma. Many athletes with PVFM can continue to participate in sports as long as they are aware of their limitations. **Conclusions:** This case study presents the signs, symptoms, and causes of PVFM in order to help health care professionals to better understand this rare disorder. As PVFM is often misdiagnosed, it is important for health care professionals to be aware of this disorder in order to properly diagnose and treat PVFM. **Word count:** 454