

Treatment with hydroxyzine for paradoxical vocal cord dysfunction



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Background

Paradoxical vocal cord dysfunction is associated with several psychiatric conditions including mood, anxiety, somatoform, and personality disorders. Early intervention for ongoing anxiety problems is reported to be beneficial for patients. While there is extensive literature supporting the use of psychological interventions, the evidence for the use of medications is limited. The aim of this case report is to add to existing literature the importance of early diagnosis of paradoxical VCD and to expand the evidence base about the medication options that can be used to treat VCD.

Objective

The importance of early psychoeducational and pharmacological interventions

Method

We present a case with paradoxical vocal cord dysfunction who was successfully treated with hydroxyzine and psychoeducational intervention.

Results

The patient experienced significant improvement with psychopharmacologic and psychotherapeutic intervention.

Conclusion

We may improve the care of the patient with a collaborative team approach and early psychiatric intervention.

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Introduction

Paradoxical vocal cord dysfunction (VCD) or paradoxical vocal-fold motion (PVFM) is an incompletely understood medical condition. It was first described by Patterson et al. in 1974 who named it Munchausen's stridor [1]. It is a functional disorder of the vocal cords that leads to acute upper airway obstruction. [2] The presentation of the disease frequently mimics an episode of asthma as patients experience intermittent symptoms that range from neck or throat tightness, inability to breathe in, persistent cough, or inspiratory stridor (3). The exact incidence and prevalence is not known as the condition is frequently misdiagnosed as asthma/ or other medical condition or is undiagnosed. Based on the available literature, certain trends are noted e. g. there is greater prevalence in females (2, 4, 5) and there is wide age range from 14. 5 to 33 years of age for the occurrence of this disorder. (3).

It is important to get a detailed physical history with physical examination and extensive work up to rule out laryngeal causes of VCD such as paralysis, granulomas or airway malacia. Once the organic causes have been ruled out the triggers for PVFM may be broadly divided into by psychological factors (accounting for 70% of the cases) and hypersensitivity reaction or other neurological disorders (accounting for the remaining 30% of the cases). [2, 5] A multidisciplinary approach is required in the management of PVFM/ VCD dysfunction. Most teams have pulmonologists, otorhinolaryngologists, speech and language pathologists, and psychologists or psychiatrists.[5]

From psychiatric standpoint it is important to do a thorough psychiatric evaluation taking into account and thoroughly investigating for history of <https://assignbuster.com/treatment-with-hydroxyzine-for-paradoxical-vocal-cord-dysfunction/>

clinical depression, history of abuse and personality disorder and other somatoform disorders.

Treatment for VCD begins with accurate diagnosis, and subsequent family education about disease. Alleviating symptoms is highly recommended before dealing with disease related stressors because the new medical diagnosis and poor symptom control may easily cause significant anxiety. There is extensive evidence for several psychological treatment options including biofeedback, hypnosis, and CBT. There is dearth of literature regarding the use of medications for the management of PFVM. We present a case of paradoxical VCD that was successfully treated with hydroxyzine along with early intervention.

Case Report

A 16-year-old, Caucasian male with history of Gastro esophageal reflux disease (GERD), seasonal allergies and sports induced asthma presented to ED with intermittent choking spells, coughing and difficulty swallowing. Patient reported that his symptoms had started as daily dry cough and then he had started experiencing choking episodes which lasted about a minute. During these episodes, patient felt he could not breathe and his throat was closing up. His symptoms had gradually worsened and he had started to fear drinking and eating. After the first emergency visitation, EGD was done which showed erosive changes and the presence of an esophageal stricture which was dilated during EGD. Patient was diagnosed with GERD and he was started on omeprazole, sucralfate and hyoscyamine. After the EGD, patient continued to avoid eating and drinking due to fear/feeling of food getting

stuck. Pt had started to experience choking episodes at night time and it wakes patient up with choking feeling and intense fear. Patient presented to ED with similar choking episode again and ENT was consulted and flexible scope was done which revealed healed pharyngeal lesions with significant inflammation and post cricoid edema. Vocal cords were mobile and the supraglottic anatomy was normal. Patient was sent home with reassurance. The following day patient presented to another emergency service and complained that he it felt there was something/ some obstruction on the left side of his throat that he could feel when swallowing. Patient was admitted to general pediatrics for further investigation. He was put on clear liquid diet briefly and his upper gastrointestinal study revealed normal anatomy. Patient switched to regular diet and psychiatry was consulted for evaluation of anxiety. Patient endorsed social anxiety and somatic symptoms. He stated he did not want to lie down on the bed due to his fear of spasmodic episodes. He was started hydroxyzine 25 mg QHS for anxiety and sleep. On follow up patient stated he was able to sleep with medication and he had only one mild episode during the night time. Speech therapy were consulted for breathing and relaxation techniques to help during laryngospasm episodes. Patient was discharged after 3 days of hospital stay. Patient was contacted over the phone a week after his discharge and he denied having any episodes since then.

DISCUSSION

Our patient initially was diagnosed with GERD and had underlying sports induced asthma. Even after being started on treatment of GERD he

continued to have intermittent choking that would wake up him up from
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sleep and his condition got worse. ENT evaluation ruled out the local causes of obstruction and speech pathology diagnosed him with VCD. It appears that GERD perhaps acted as a trigger for paradoxical VCD in this case but it did not explain the worsening choking spells. Eventually, psychiatry team assessed him and started him on hydroxyzine. Patient was also provided psychoeducation about the disease and the possible relationship with anxiety and sleep problem. In general the management of VCD requires a multidisciplinary approach. It is important to treat co-morbid conditions like GERD, asthma. Further discussion is focused on psychological interventions and management of VCD from a psychiatric standpoint.

On review of literature it was found that the prevalence of psychological/psychiatric co-morbidity in patients with VCD has been reported to be as high as 75%. [6] Some of psychiatric conditions associated with VCD are depression [7, 8, 9], anxiety [8, 10], post-traumatic stress disorder, histrionic personality disorder [8], conversion disorder [10]. Other stressors and factors at play leading to VCD are childhood sexual abuse [11], primary and secondary gain related to somatoform disorders [12] and bullying [13]. In a retrospective study involving 160 patients Dietrich et al. (14) analyzed the distribution and frequency of perceived stress, anxiety, and depression in patients who presented to their voice disorders clinic with various voice disorders (including VCD). The authors reported that VCD patients had highest prevalence of stress, anxiety and depression. Most voice disorders were more in females as compared to males, however surprisingly it was found that males with VCD had a much higher prevalence perceived stress, anxiety, and depression.

Many studies have supported the use of various types of psychological interventions/ psychotherapies like cognitive behavioral interventions [15], hypnotherapy [7, 13, 16], biofeedback [7, 17], speech therapy [4, 5, 6, 7, 16] and psychotherapy [4, 5, 6, 8]. Regarding medication use there is a dearth of literature. Psychotropic medications have been used but sparingly for the management of underlying psychiatric co-morbidity. Benzodiazepines has proven successful in some particular patients who have underlined anxiety problem. In treating 62 patients with VCD Varney et al [5] reported majorly positive experience with low-dose amitriptyline in conjunction with psychotherapy and behavioral therapies. Brown et al. (9) reported an adult with VCD along with depression and psychogenic amnesia who was treated with psychotherapy and oral desipramine therapy. Another adult with VCD reported by Thurston et al. (6) had been treated with a combination of psychotherapy and multiple medications, which included citalopram and venlafaxine and later a higher dose of venlafaxine with lithium augmentation.

Our patient reported some anxiety during the interview. Patient also complained of some anticipatory anxiety related to difficulty swallowing food and multiple episodes of breathing difficulty at night. The frequent ER visits were an indicator of severe impairment. Patient had significant sleep initiation problem. Hence reviewing the overall condition it was decided to initiate hydroxyzine to help with sleep and anxiety. Hydroxyzine is a first-generation antihistamine which has anticholinergic antihistaminic, antiemetic, antispasmodic, and anxiolytic properties. (18) Its selective antihistamine profile which leads to the sleep-promoting benefits of H1-receptor

blockade with minimal anticholinergic side effects. (19)

Although the exact action of mechanism is unknown, it also plays a role in the management of anxiety. Our case report may show hydroxyzine can be a safer alternative therapy. When compare with other medication, amitriptyline can increase the QT interval which could cause arrhythmias. However, the adverse reactions profile of the long used hydroxyzine, well described in the literature, is limited, with sedation being the most prominent (13).

CONCLUSION

VCD is a functional disorder. Management requires multidisciplinary approach. There are some studies that have explored use of psychological intervention but there is paucity of literature on the use of psychotropic medications. At this time there are no established guidelines to treat patients with VCD. Our case report indicated that hydroxyzine could be a good treatment option for VSD. More research is needed to explore the use of psychotropic medications in VCD.

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