

# Sertraline and cognitive behavioral therapy in the treatment of psychogenic dysphonia: A case report

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## SUMMARY

Psychogenic dysphonia (PD) is the inability of the structurally normal vocal cords to perform their proper vocalization function. In other words, it can be defined as the inappropriate or incorrect use of the normal vocal organ. The role of emotional stress is important in the formation of psychogenic dysphonias. It is a transformative clinical condition that is difficult to diagnose and treat. There are various studies in the literature regarding the diagnosis, evaluation and treatment approaches of patients with psychogenic dysphonia. The combination of sound therapy and psychotherapy is often used together, as psychogenic dysphonia symptoms and psychological factors mutually influence each other. Pharmacotherapy can also be among the treatment approaches, but this method is only applied in certain situations. The success of treatment may vary depending on the patient's symptoms, response to treatment, and other factors. Therefore, it is important to develop an individualized treatment plan for each patient. There are limited studies on pharmacotherapy in treatment. In this case report, it is aimed to discuss a male psychogenic dysphonia case who responded dramatically to sertraline treatment in the light of the literature.

**Keywords:** Psychogenic dysphonia, conversion disorder, sertraline, voice disorders.

## INTRODUCTION

Psychogenic dysphonia refers to loss of voice in the absence of obvious structural or neurological pathology. It can also be named as functional, converse and hysterical dysphonia (1). It is a disorder that is more common in women with a ratio of 8:1. The prevalence rates reported in a study conducted on patients admitted to voice disorder clinics are between 4-5% (2). Although the etiology is still not clear, it has been stated that a psychologically stressful event in the patient's life plays a role in triggering the condition. The diagnosis of psychogenic dysphonia can usually be made after a thorough physical examination and evaluation by an otolaryngologist (ENT) and neurologist. A person with dysphonia may have a laryngoscopy or fiberoptic endoscopy test performed to determine if there are any organic problems with their vocal cords or airways. If these tests return normal

results, the person may be dysphonic for a psychological reason (3, 4). Psychogenic dysphonia can be treated with different approaches, such as speech therapy, psychotherapy, and medication. In this case report, we will present a case of psychogenic dysphonia in male gender, which did not improve as a result of cognitive behavioral therapy and sound therapy, but improved with sertraline treatment.

## CASE HISTORY

Mr. Ü.A is a 32-year-old, single, high school graduate, working male patient. The patient, who had no previous psychiatric treatment history, was referred to the psychiatry outpatient clinic from the otolaryngology outpatient clinic with the complaint of sudden onset of hoarseness and intermittent inability to speak. The patient stated that as a result of an argument with his boss and his colleagues at work

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about 3 weeks ago, he could not answer his boss, could not speak, and then experienced hoarseness. He stated that this situation he experienced in front of his colleagues made him very embarrassed and that he could not go to work for a certain period of time. The patient was examined in the otorhinolaryngology and neurology department. When no organic cause could be found for his hoarseness, he was referred to the psychiatry outpatient clinic. The patient stated that he felt tired, unhappy and anxious, and experienced an intense sense of shyness. In the mental state examination of the person, he was consciously oriented and cooperative. Himself care was good, he looked his age. Speech volume and speed decreased. Voice volume was low. He had hypophonia. Mood was depressive and anxious. The affect was anxious. There was no psychotic finding in perception. His thought process and associations were normal. There were concerns and concerns that he could not improve in his thought content. His psychomotor activity was decreased. In psychometric scales, Hamilton Depression Rating Scale (HDRS) was evaluated as 27 points and Hamilton Anxiety Rating Scale (HARS) was evaluated as 21 points. It was determined in the Minnesota Multiphasic Personality Inventory (MMPI) that the patient had dependent personality traits and expressed his feelings with bodily complaints. In the neurological examination of the patient, who had no special history or family history, the voice was quite hypophonic, and involuntary movements were observed due to excessive strain on speech, and strain on the chin and lips. All other neurological examinations were normal. Routine hematological examinations (blood count, detailed blood biochemistry, routine urinalysis, thyroid function tests, and thyroid antibodies, B12-folic acid levels) were found to be normal, and no abnormality was found in further laboratory examinations. Cranial magnetic resonance was evaluated as normal. Ear, nose, and throat consultation was requested in terms of hoarseness, and no anomaly was detected in the laryngoscope examination. The patient was re-evaluated in terms of speech disorder, and a diagnosis of major depressive disorder and psychogenic dysphonia was made according to DSM-5 as a result of the acute onset of the present disorder after psychogenic stress, the individual's psychiatric examination and psychometric test evaluations. The patient was started on ser-

traline 50 mg/day. The dose was gradually increased to 100 mg/day. In addition, psychotherapy and sound therapy were initiated. Voice therapy was carried out in the form of supporting the voices that can be extracted in psychogenic voice disorders and applying special techniques in order to make the voices that cannot be produced. The person was followed from the outpatient clinic for about 3 months. At the control examination after three months of treatment, the patient's HDRS decreased to 7 points and the HARS to 6 points. The tone of voice was high, the articulation and prosody of the speech were normal, and the patient's speech was evaluated as close to normal by him and his relatives. The patient's hoarseness improved dramatically. Informed consent was received from him and his family regarding this case report.

## DISCUSSION

PD is defined as the loss of sound structure and intensity that cannot be explained by structural or neurological problems, and this loss in phonation is associated with psychogenic processes such as anxiety disorder, depression, personality disorder and conversion disorders. The prevalence of conversion dysphonia among all conversion disorders is 4-5% (3). Conversion dysphonia's usually occur after conditions that develop close to psychogenic trauma and can cause hoarseness, such as pharyngitis due to viral infections. More rarely, however, very severe and persistent converse dysphonia's may occur under unclear or unrelated conditions and may have preceded the onset of stress factor dysphonia for months or years. In psychogenic dysphonia, the voluntary use of the voice is affected and there is no articulation. However, vegetative vocal functions such as coughing, laughing, sighing or crying are usually not affected (5). As in our patient, while the patient had difficulty in making sounds and saying words, other vocal functions such as coughing and laughing were intact.

The etiology of psychogenic hoarseness is multifactorial. In our case, voice disorder started acutely immediately after the stress factor. It is important to take a detailed medical history when evaluating a patient with hoarseness. The information

obtained in the anamnesis may be useful in determining the cause of hoarseness or detecting another underlying condition. Psychogenic dysphonia is a type of conversion disorder in which the ability to vocalize is impaired. In psychogenic mutism, the patient does not make an effort to talk. About 5% of psychogenic dysphonia's are cases of psychogenic mutism (3). While PD was included under the motor symptom or deficit type of conversion disorder in the DSM-IV (as aphonia), it was included under the speech symptom type as dysphonia in the DSM-5 (6). Today, there is a consensus that it is not sufficient to exclude organic diseases for the diagnosis of PD, and psychiatric evaluation with a multidisciplinary approach is essential (7,8). Its treatment should be approached multidisciplinary. In the literature, some clinical features that distinguish patients with functional voice disorders from organic diseases have been described by other disciplines (9). For example; These features include acute onset, variable symptom severity on examination of different speech activities, susceptibility to suggestion, symptom relief with distraction, rapid regression and improvement potential of symptoms, increased muscle contraction with paradoxical vocal fatigue, denial and indifference for abnormal speech/voice. It is frequently emphasized that there is a sudden onset especially in psychogenic voice disorders (9). Usually, PD starts acutely and there are problems related to stress in the past (10). In our patient, hoarseness started suddenly after an event that was stressful for him. The diagnosis should be made after the otolaryngologist and psychiatrist both evaluate the patient. Ultimately, the diagnosis should be made with an integrated, multidisciplinary approach (10, 11). An empathetic, supportive approach is essential in patients with PD. The patient should be discussed carefully and openly. It is wrong to give the message that there is no underlying cause. Because this message may cause the patient to abandon the treatment. Role-playing and malingering discourses are dangerous. It should be emphasized that the symptoms are unconscious. Evaluation of the patient's personality traits also helps to determine the treatment framework. In a recent study on patients with dysphonia, including patients with functional dysphonia, differences in the tendency to activate the introversion, neuroticism and behavioral inhibition system were reported in these patients (12). Our patient

was found to have dependent and alexithymic personality patterns in the MMPI test. Avoidance tendencies of the patient, alexithymia and somatoform tendencies can be detected in PD patients (13,14).

Research on the neurobiology of psychogenic dysphonia suggests that neurotransmitters in the brain such as serotonin and dopamine may also play a role in this speech disorder. Serotonin plays an important role as a chemical messenger that enables communication between nerve cells in the brain. Decreased serotonin levels can cause increased stress responses in the brain and increased muscle tension of the vocal cords, which can lead to symptoms of psychogenic dysphonia. Brain imaging techniques, particularly functional magnetic resonance imaging (fMRI), are important tools used to investigate the pathophysiology of psychogenic dysphonia (15). These techniques can reveal changes in communication between different regions of the brain and changes in brain activity. SSRIs are drugs used to treat conditions such as depression, anxiety, and obsessive-compulsive disorder by increasing serotonin levels in the brain. Research on the effects of SSRIs on psychogenic dysphonia is limited. However, some studies have shown that SSRIs can improve symptoms of psychogenic dysphonia. However, more research is needed on the specific effects of SSRIs on the neurobiology of psychogenic dysphonia. In conclusion, the pathophysiology of psychogenic dysphonia is not yet fully understood and more research is needed on this subject.

The treatment of PD actually begins with the explanation of the diagnosis to the patient and the acceptance of the treatment plan by the patient (16). The relationship between psychosocial stress factor and dysphonia symptom should be explained to the patient. If the link between his symptom and his psychological state is not explained to the patient, he may not understand the importance of treatment. The relationship between the brain, nerve and vocal cord triad in psychogenic dysphonia should be explained. As in all PD's, comorbid anxiety disorder, depressive disorders, post-traumatic stress disorder and hypochondriasis are high in PD (17, 18). There are no studies other than a few uncontrolled studies showing the antidepressant or anxiolytic efficacy in patients with PD. Only

randomized non-placebo-controlled studies have shown some antidepressant efficacy for PD (19). Therefore, if there is a comorbid diagnosis, antidepressants can be started. In our patient, sertraline treatment was started because dysphonia was accompanied by anxiety and depressive symptoms. The patient received simultaneous cognitive behavioral therapy and sound therapy. The content of CBT includes information about PD and the stress response cycle, attempts for the patient to manage stress and develop new behavioral patterns, and helps patients to recognize and change their useless thoughts. It is important to identify and change the thought patterns that reinforce the patients' symptoms and that do not work (16). The patient can be given daily vocal exercises such as blowing, whistling, spelling. The way the patient with psychogenic aphonia/dysphonia forces himself to speak further increases the hoarseness functionally. Thus, it pulls the patient into a vicious circle (16). In fact, the aim of sound therapy is to break this vicious circle. In the past, some researchers suggested voice therapy as an alternative treatment for patients who did not respond to psychotherapy interventions (20). In a more recent study, it was shown that there was a 93.1% response to voice therapy in patients with PD. In addition, in the same study, the rate of relapse was found to be high in those who received only voice therapy (11). In fact, sound therapy has similar purposes to psychotherapy. Voice therapy is similar to the behavioral component of cognitive behavioral therapy. The goal in voice therapy is to create a more adaptive voice. In sound therapy, a natural sound is created by using non-communicative sounds such as throat clearing, coughing, gargling and laughing. After switching to natural voice, there is a gradual transition to speech production. Voice therapy is usually planned as 2-4 sessions and each session lasts 40 minutes (11).

Despite the importance of psychological factors in the etiology of PD, the fact that it responds to a functional intervention and at the same time decreases regeneration with psychotherapy supports the importance of a holistic approach in these patients. This also makes this PD an interesting model to demonstrate the link between chronic stress, emotional dysregulation, and functional neurological loss. As with all FNBs, a multidisci-

plinary holistic approach is essential in the treatment of PD. Mental health professionals should cooperate with an otolaryngologist both in the differential diagnosis and in the treatment process. In order to prevent unwanted diagnosis and treatment attempts, the diagnosis should be shared with the otolaryngologist as soon as it is clear. Approaching the problem only psychologically or only functionally makes diagnosis and treatment difficult. As a result, dysphonia symptom and psychological factors mutually affect each other. Integrated therapy, in which psychotherapy and voice therapy are used together, is the gold standard approach in the treatment of PD.

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