

INTEGRATION OF PSYCHOTHERAPY AND FUNCTIONAL INTERVENTIONS IN THE TREATMENT OF PSYCHOGENIC DYSPHONIA: 5 CASES TREATED ASYNCHRONOUS

Behice Han Almis

Adiyaman University, Faculty of Medicine, Department of Psychiatry, Adiyaman, Turkey

received: 6. 4. 2022;

revised: 30. 4. 2022;

accepted: 19. 1. 2024

* * * * *

INTRODUCTION

In psychogenic dysphonia (PD), which is a symptom of functional neurological disorders (FND), the ability to make a voice is impaired (APA 2013, Andresson & Schalén 1998). FND or conversion disorder is characterized by neurological symptoms that are unexplained by neurological conditions or classical medical conditions (APA 2013). In PD, vocal cord function is impaired but there is no structural or neurological larynx damage. There is no ability to make a sound in psychogenic aphonia and psychogenic mutism, which are PD. The main difference between these two disorders is that there is no mouth movement in psychogenic mutism. Cases of psychogenic mutism account for about 5% of PD (Baker 2002, Andresson & Schalén 1998).

Recent researches in FND have focused on physiological factors rather than psychological factors (O'Neal & Baslet 2018). Moreover, in DSM V diagnostic criteria there is no need to accompany psychological factors for the diagnosis of FND (APA 2013). Changes in DSM V emphasizing the concept of functionality in FND and integrating etiological factors have recently required integration in treatment (APA 2013).

Although there is more data in the literature on other FND, there is limited data about treatment approaches in psychogenic dysphonias (O'Neal & Baslet 2018, Roy 2003).

Additionally, despite the psychological etiology in PDs the response to circular laryngeal manual massage which is a functional intervention is good (Roy 2003). All of these prove the need for an integrative approach in PD like other FNDs. Because integrative approaches to PD, which are a symptom type for FND, are the best ones, we applied an integrative treatment in the following 5 cases. We aimed to contribute to the literature by sharing our results.

Written informed consent was obtained from the patients for publication of these cases report.

CASE REPORTS

Case 1

A 37-year-old female housewife acutely developed loss in her voice while fighting with her husband three week ago. She was told by the otolaryngologist that she did not have a disease that prevented her from speaking and that it was psychological. She did not have any psychiatric or medical illness other than anxiety disorder in the past. Past laryngoscope examinations were recorded as normal. Patient's coughing, laughing, sighing and crying were intact. As a result of the psychiatric examination of the patient, no comorbid psychiatric diagnosis was detected. A patient with no mouth movement and no speech was diagnosed with psychogenic mutism.

Case 2

A 58-year-old female housewife acutely developed distortion in her vocalization. There was no identified stressor prior to the onset of symptoms. The patient's symptoms started four months ago. She was told by an otolaryngologist that she did not have a disease that would disrupt her speech. Past laryngoscope examinations were recorded as normal. Patient's laughing, crying, sighing and coughing were intact. The patient had a history of non-epileptic psychogenic seizures in the past. As a result of the psychiatric examination of the patient, no comorbid psychiatric diagnosis was detected. This patient with mouth movement and slurred speech was diagnosed with psychogenic dysphonia.

Case 3

A 19-year-old female student acutely developed loss in her voice four weeks ago. As a result of the otolaryngologist examination with laryngoscope, the patient was told that there was no problem. It was reported by the

patient's relatives that he learned the result of the university exam as a pre-symptom stressor. She did not have any psychiatric or medical illness in the past. As a result of the psychiatric examination of the patient, no comorbid psychiatric diagnosis was detected. Patient's coughing, laughing, sighing and crying were intact. A patient with no mouth movement and no speech was diagnosed with psychogenic mutism.

Case 4

A 18-year-old female student acutely developed loss in her voice while speaking on the telephone with her father two weeks ago. As a result of the otolaryngologist examination, the patient was told that there was no problem. Past laryngoscope examinations were recorded as normal. It was reported by her family that she had not seen his father for many years. She did not have any psychiatric or medical illness in the past. As a result of the psychiatric examination of the patient, no comorbid psychiatric diagnosis was detected. Patient's crying, laughing, sighing and coughing were intact. This patient with mouth movement and no speech was diagnosed with psychogenic aphonia.

Case 5

An 18-year-old male student developed an acute loss in his voice. The patient's mother gave a history as follows, before the symptoms started, he had argued with the patient's father's family for insulting him. The patient's symptoms started about 5 months ago. As a result of the otolaryngologist examination with laryngoscope, the patient was told that there was no problem and that it was psychological. He did not have any psychiatric or medical illness other than psychogenic movement disorders in the past. As a result of the psychiatric examination of the patient, no comorbid psychiatric diagnosis was detected. Patient's laughing, crying, sighing and coughing were intact. This patient with no mouth movement and no speech was diagnosed with psychogenic mutism.

INTEGRATIVE TREATMENT METHOD APPLIED TO 5 CASES

These 5 psychogenic dysphonia cases received a combination of psychotherapy and functional interventions. Cognitive behavioral therapy (CBT) was used as a psychotherapy method and voice therapy was applied as a functional intervention. Cases received therapy twice

a week for 6 weeks. Afterwards, they were followed up once a month for 1 year.

The applied CBT content included:

1. Information about FND and the stress response cycle
2. Information and training on stress management
3. Developing new behavioral responses (supported by homework)
4. Daily vocal exercises such as blowing, whistling, spelling
5. Identifying and changing unhelpful thought patterns that reinforce patients' symptoms

The applied voice therapy content included:

1. Brief information about the anatomy, physiology and formation of voice disorders of the larynx
2. Exaggerated chewing movement to reduce extrinsic muscle tone, sticking out the tongue, yawning-sighing with laryngeal massage
3. Humping exercises
4. Conversion of intact vegetative vocalizations such as coughing, laughing, crying, sighing into syllable-words, then sentences, and then conventional speech
5. Inhalational phonation (increasing vocal cord vibration by producing a high pitched sound when breathing in)

The response times of cases to integrated treatment are given in Table 1.

DISCUSSION

We also applied combined therapy consisting of CBT and voice therapy to 5 of our patients diagnosed with PD, and all of them responded fully to the treatment. Moreover, we did not see relapse in any of the patients at the end of 1-year follow-up. CBT has previously been shown to be effective in FNDs (Sharpe et al. 2011). Tezcaner et al. (2019) reported the response rate to voice therapy in PD as 93.1% in their study. In the same study, the rate of relapse was found to be higher in those who received only voice therapy than those who added psychotherapy to their treatment (Tezcaner et al. 2019). Although symptoms improve in patients with FND, the same or different FND symptoms may develop in long-term follow-up. In our 1-year follow-up, no other FND symptoms were observed in the patients after treatment.

Table 1: Sociodemographic and clinical characteristics of cases and response times to treatment

	Case 1	Case 2	Case 3	Case 4	Case 5
Age (years)	37	58	19	18	18
Gender	Female	Female	Female	Female	Male
Stress factor	Yes	No	Yes	Yes	Yes
Onset	Acut	Acut	Acut	Acut	Acut
Symptom duration	3 weeks	4 months	4 weeks	2 weeks	5 months
Vegetative vocal functions	intact	intact	intact	intact	intact
Psychiatric disorder in the past	Nonepileptic psychogenic Seizure and anxiety disorder	None	None	None	Psychogenic movement disorders
Psychiatric disorder in the family	Anxiety disorder	Depression	None	None	Struttering
Response time to treatment	2 weeks	4 weeks	1 week	1 week	2 weeks

In our patients, those with longer symptom duration responded to treatment later. This shows the importance of starting treatment early in psychogenic dysphonia.

In the treatment of PD, it is aimed to restructure the effect of the brain on the vocal cords. In the treatment of PD, first of all, this disorder should be explained to the patient and the treatment protocol should be accepted by the patient (O'Neal & Baslet 2018). We did this in CBT primary care.

In patients with PD, increased activity in the medial prefrontal region and decreased emotional reactivity in the amygdala have been reported with fMRI during symptoms (Spengler et al. 2017). This finding is valuable in demonstrating emotional dysregulation in patients with PD. In fact, there were attempts to prevent emotional dysregulation in the 2nd, 3rd and 5th steps of CBT that we applied.

It is said that in FNDs the risk of komorbid anxiety disorders, depressive disorders, post-traumatic stress disorder and hypochondriasis is high (Hoge et al. 2007, Waller & Scheidt 2004). However, there was no komorbid diagnosis in our 5 patients diagnosed with PD, a subtype of FND. There are no controlled randomized studies showing the antidepressant effect in FND (O'Neal & Baslet 2018). We did not give antidepressants to our patients because they did not have any other komorbid psychiatric diseases.

Studies have shown that 78% -93% of FND patients are women (Tomasson et al. 1991, Deka et al. 2007). 80% of our cases were female, consistent with the literature.

It is stated in the literature that the vegetative vocal functions are preserved in the PD (Davids et al. 2012, Van Houtte et al. 2011). In PD, the use of the volunter sound is affected and the patient's articulation is impaired. But vegetative vocal functions such as sighing, crying, laughing, and coughing are generally not affected (Davids et al. 2012, Van Houtte et al. 2011).

Vegetative vocal functions were intact in all 5 of our PD cases as stated in the literature.

Most patients with PD are observed to have an acute onset, and most of them describe stress related problems (Andresson & Schalén 1998, Baker 2002). Consistent with the literature, all of our cases had acute onset, and 4 of them defined stress factors while 1 of them did not.

In conclusion, we treated 5 cases of PD, a rare FND subtype, with a combination of CBT and voice therapy. This article is valuable as it shows that this combined treatment is effective without starting antidepressants in patients with PD who do not have a komorbid psychiatric diagnosis. However, if these rare cases can be found in sufficient numbers, future controlled randomized studies may clarify this issue.

Ethical Considerations: Does this study include human subjects? YES

Authors confirmed the compliance with all relevant ethical regulations.

Conflict of interest: No conflict of interest

Funding sources: The authors received no funding from an external source.

References

- American Psychiatric Association: *Diagnostic and statistical manual of mental disorders*. 5th ed. Washington (DC), American Psychiatric Association, 2013
- Andresson K & Schalén L: Etiology and treatment of psychogenic voice disorder: results of a follow-up study of thirty patients. *J Voice* 1998; 12: 96–106.
- Baker J: Psychogenic voice disorders—heroes or hysterics? A brief overview with questions and discussion. *Logoped Phoniatr Vocol* 2002; 27: 84–91.
- Davids T, Klein AM, Johns MM: Current dysphonia trends in patients over the age of 65: is vocal atrophy becoming more prevalent? *Laryngoscope* 2012; 122:332–5.
- Deka K, Chaudhury PK, Bora K, Kalita P: A study of clinical correlates and socio-demographic profile in conversion disorder. *Indian J Psychiatry* 2007; 49: 205–7.
- Hoge CW, Terhakopian A, Castro CA, Messer SC, Engel CC: Association of posttraumatic stress disorder with somatic symptoms, health care visits, and absenteeism among Iraq war veterans. *Am J Psychiatry* 2007; 164:150–3.
- O'Neal MA & Baslet G: Treatment for Patients With a Functional Neurological Disorder (Conversion Disorder): An Integrated Approach. *Am J Psychiatry* 2018; 175(4): 307–14.
- Roy N: Functional dysphonia. *Curr Opin Otolaryngol Head Neck Surg* 2003; 11: 144–8.
- Sharpe M, Walker J, Williams C, Cavanagh C, Murray G et al.: Guided self-help for functional (psychogenic) symptoms: a randomized controlled efficacy trial. *Neurology* 2011; 77:564–72.
- Spengler FB, Becker B, Kendrick KM, Conrad R, Hurlmann R, Schade G: Emotional Dysregulation in Psychogenic Voice Loss. *Psychother Psychosom* 2017; 86:121–3.
- Tezcaner ZÇ, Gökmen MF, Yıldırım S, Dursun G: Clinical Features of Psychogenic Voice Disorder and the Efficiency of Voice Therapy and Psychological Evaluation. *J Voice* 2019; 33(2):250–4.
- Tomasson K, Kent D, Coryell W: Somatization and conversion disorders: comorbidity and demographics at presentation. *Acta Psychiatr Scand* 1991; 84: 288–93.
- Van Houtte E, Van Lierde K, Claeys S: Pathophysiology and treatment of muscle tension dysphonia: a review of the current knowledge. *J Voice* 2011; 25:202–7.
- Waller E, Scheidt CE: Somatoform disorders as disorders of affect regulation: a study comparing the TAS-20 with non-self-report measures of alexithymia. *J Psychosom Res* 2004; 57:239–47.

Correspondence:

Behice Han Almis, Assoc. Prof.
Department of Psychiatry, Adiyaman University
Faculty of Medicine, TR02200, Adiyaman, Turkey
behice@hotmail.com / 0 505 572 45 95

Published under



<https://creativecommons.org/licenses/by-nc-nd/4.0/>