Stuck song syndrome

A case of obsessive-compulsive disorder presenting with musical obsessions

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ABSTRACT

The article presents a case of a 32-year-old woman who has been experiencing episodes of musical obsessions for the past 12 years. The case highlights the importance of addressing stuck song syndrome due to its effects on the functioning of the patient. The psychopathological expressions of this condition in relation to obsessive-compulsive disorder (OCD) are described. The discussion provides distinction between the differential diagnoses of palinacousis, musical hallucinations, and musical obsessions. Lastly, the recognized treatment options for musical obsessions are explored.

CASE PRESENTATION

A 32-year-old woman experienced monthly episodes of musical obsessions, lasting for 1-2 weeks, for the past 12 years.¹ The episodes persisted day and night, resulting in the development of insomnia over the previous 2 years. The musical obsessions consisted of songs, musical fragments, and tunes from a wide array of genres and sources. The stuck song generally contained both vocal and instrumental elements. The patient experienced musical obsessions as repetitive sounds within her head that were not under voluntary control. The patient recognized that the episodes largely interfered with her day-to-day functioning due to the increased distress and anxiety she felt during the episodes. The patient began to introduce behaviours that aimed to reduce the associated anxiety. The patient attempted to wear headphones and listen to music that differed from the stuck song, however she reported that this approach increased her anxiety due to the songs not matching. Over time, the patient determined that listening to the song in her head at a high volume through headphones provided some relief with respect to her anxiety; however, the therapeutic effects were short-lived. The patient's lack of control of the situation triggered significant frustration, despair, and poor academic performance, all of which contributed to her significantly diminished quality of life.

The patient had a previous medical history of bulimia nervosa during adolescence which was successfully managed with psychotherapy. There was no history of mental or neurological illnesses in her family. The patient had been taking eszopiclone 3 mg for the past 2 years which was successful in treating her insomnia.

When referred to and evaluated by a psychiatrist, a clinical interview was conducted to evaluate the semiology and phenomenology of the patient's musical obsessions. The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) was utilized. The cumulative score obtained from the obsessions and compulsions scales was 33, indicating severe obsessive-compulsive disorder

(OCD). A diagnosis of stuck song syndrome was made based on the history of musical obsessions and diagnostic criteria of OCD. Aside from the musical obsessions, no other obsessions or compulsions were identified in the patient. The Beck Depression Inventory was performed and did not detect the presence of clinical depression. The Hamilton Anxiety Rating Scale was reported as 31, which corresponds to moderate to severe anxiety. The neurological exam, complete blood count, thyroid-stimulating hormone, free T4, vitamin B12, folic acid, VDRL, ionogram, auto-antibodies, kidney and liver function tests, brain magnetic resonance imaging, and electroencephalogram were reported as within normal limits.

Treatment with fluvoxamine 200 mg daily over 12 weeks reduced the frequency of symptoms but not their intensity. Subsequently, paroxetine controlled-release tablets at a dose of 50 mg daily was not well-tolerated due to associated side-effects. Finally, fluoxetine 60 mg daily was prescribed for 12 weeks, which effectively reduced the intensity of the patient's symptoms. The Y-BOCS score was re-evaluated and determined to be 13, which was indicative of mild OCD and corresponded to a 60% score reduction compared to the pre-treatment score. The patient was advised about the potential benefits of cognitive behavior therapy (CBT) as well as other psychotherapeutic approaches, however the patient refused further treatment.

DISCUSSION

OCD and Musical Obsessions

OCD is a heterogeneous psychiatric disorder manifested by recurrent, unwanted, and distressing thoughts, impulses, images or sounds (obsessions) and repetitive and irresistible behaviors (compulsions).² OCD is considered one of the most common mental health disorders in high-income countries and ranks among the top 20 causes of disability worldwide.³ OCD is associated with increased mortality, and has been shown to have a substantial impact on the quality of life for both patients and their families. Intrusive mental imagery (IMI) has long been recognized as a fundamental feature of OCD, yet clinical case reports and research have primarily focused on visual imagery. Phenomena involving IMI have been largely overlooked in contemporary OCD research, even though descriptions of IMI have appeared in psychological and psychiatric literature for more than a century.⁴ Mild and transient episodes of IMI are nearly universally experienced; however, when episodes are associated with prolonged anxiety and distress, then such musical obsessions should be evaluated in the context of OCD.

Musical obsessions are defined as repetitive, persistent, and involuntary IMI that cause clinically significant anxiety and distress.⁵ Musical obsessions are currently considered to be rare,

and often may go unnoticed because of their low clinical awareness. The current research indicates that the prevalence and importance of musical obsessions has been largely underestimated, with only 100 case reports available.⁶ At this time, the presentation of OCD in the form of musical obsessions, termed stuck song syndrome, has not been widely described nor considered in the various diagnostic procedures for OCD. OCD is a highly heterogeneous and complex condition. It is therefore inadequate to only investigate the prototypic symptoms, such as washing or checking compulsions. A comprehensive understanding of OCD requires analysis of the less common symptoms as well.⁷

Differential Diagnosis

The following discussion outlines the key characteristics of musical hallucinations and palinacousis to distinguish these disorders from musical obsessions. Accurate diagnosis of musical obsessions is crucial so that proper treatment is initiated. Due to musical obsessions not being delineated by diagnostic criteria in the *Diagnosics and Statistics Manual 5*, nor directly measured by the Y-BOCS score, it is imperative that clinicians directly inquire whether the patient experiences such symptoms. Also, the physician must gather adequate information to rule out differential diagnoses.

Hallucinations are perceptions lacking an adequate input stimulus, which are perceived to originate from an external source. Musical hallucinations are reportedly rare.⁸ Conditions which have been associated with musical hallucinations include acquired hearing loss, epilepsy, structural brain lesions, psychosis, delirium, drug induced states, and hypnagogic states.⁹ Key distinctions between musical hallucinations and musical obsessions are that the latter are a form of IMI that the person recognizes as originating from their own mind. As well, musical obsessions can only be described in people who do not suffer from hearing disorders or neurological pathology.¹⁰

Palinacousis is considered a persistent and recurring paroxysmal auditory hallucination, in which echoing of an external auditory stimulus occurs after cessation of the stimulus.¹¹ The auditory perceptions are environmentally produced in the form of exact replicas or fragmented sounds after the initial stimulus has ended. Palinacousis is rare, with musical palinacousis being even rarer.¹² Palinacousis is associated with neuroimaging abnormalities indicative of structural brain conditions, including cortical atrophy, primary tumours, and metastatic disease.¹³ Palinacousis is strongly associated with neurological deficits, such as aphasia, whereas musical obsessions are not associated with such pathology. An additional distinguishing feature of palinacousis is that the sounds are usually localized to one ear, whereas musical obsessions originate in one's mind and do not have unilateral character. Furthermore, palinacousis is limited to the last thing the person heard, whereas musical obsessions consist generally of songs that the patient heard at some point in the past.^{12,14}

Treatment Options

It is of utmost importance to accurately diagnose musical obsessions, since failure to do so can result in inappropriate treatment that may cause harm to the patient. In the literature, it was

noted that the most common misdiagnosis of musical obsessions is as a psychotic disorder. This resulted in the prescription of anti-psychotic medications which did not improve, and in some cases worsened, the symptoms of patients. The following sections describe the main treatment options for musical obsessions.

Certain pharmacotherapy has been shown to be effective for treating musical obsessions. Such medications include selective serotonin reuptake inhibitors and clomipramine.¹⁵ Antipsychotics showed no benefit when used to treat musical obsessions, however they were efficacious in the treatment of musical hallucinations.¹⁶

CBT was shown to reduce the anxiety and distress associated with musical obsessions through acceptance-based interventions. Restructuring thoughts regarding the threat and underlying meaning of musical obsessions was shown to be beneficial for patients. These sessions often included educating patients about the normalcy of IMI and encouraging them to accept the intrusive music instead of attempting to repress the noise.^{17,18}

Distraction-based treatments are not recommended for prototypic OCD symptoms; however, studies have shown potential benefits arising from such treatment for musical obsessions.¹⁹ Several different methods of distraction techniques have been explored in IMI and musical obsessions. Effective distraction may involve keeping busy with a task during an episode, singing the song out-loud but in a different key than the original melody, or tapping a rhythm that varies from the repeating musical fragment. Through introducing different stimuli and associations with the repeating song, this may increase the flexibility of the associations to the stuck song so that a single aversion does not perpetuate the repetition of the song.²⁰

CONCLUSIONS

The reported case allows for discussion of the spectrum that exists concerning musical imagery and its relationship to OCD. A detailed description of the differential diagnoses was included. The case provides an example of an often-overlooked presentation of OCD that was able to be well managed (60% Y-BOCS score reduction) using 60 mg daily of fluoxetine for 12 weeks. The article highlights the importance of proper diagnosis and treatment of stuck song syndrome due to the significant impact on the mental, emotional, and physical well-being of people experiencing this disorder.

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