



A case of medically unexplained cough in a 12 year old girl

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General Note



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ABSTRACT

A 12 year old girl with previous history of Tourette syndrome and generalized anxiety disorder presented to an in-patient pediatric psychiatry unit with sudden onset repetitive cough for 3 weeks. An extensive medical work up did not reveal any medical explanation for her presentation. Two main diagnoses (tic cough and somatic cough syndrome (also known as psychogenic cough) were considered. The patient was followed for several weeks in the out-patient psychiatry clinic after discharge allowing the diagnostic formulation of her presentation to evolve. A mixed-approach intervention was implemented leading to significant improvement in her symptoms. The diagnostic quandary of medically unexplained cough in the presence of multiple confounding factors is examined.

Keywords: Somatic cough syndrome, Tic cough, Conversion disorder, Comorbidity

1. INTRODUCTION

Different terms have been used to describe cases of persistent cough without a clear pulmonary or extrapulmonary (e.g. gastroesophageal reflux disease) etiology in the presence of suggestive clinical characteristics or an association with psychological issue. These include habit cough, psychogenic cough, and tic cough (Haydour et al. 2014). However, these terms are not clearly defined or distinguished from each other. The literature suggests that the classic features of these conditions include repetitive, loud, dry, honking cough and absence of cough during sleep (Bhatia et al. 2002). Psychogenic cough was found to be the second most common cause of chronic cough in children aged 6 to 16 years (Holinger and Sanders, 1991). Medically unexplained cough is commonly comorbid with other psychiatric conditions. Conversion disorder, generalized anxiety disorder (Haydour et al. 2014) and school phobia (Bhatia et al. 2002) are the most commonly reported conditions. In a systemic review, hypnosis, suggestion therapy, and counseling and reassurance were the most commonly used treatment interventions (Haydour et al. 2014).

In the 2015 updated guidelines for assessment and treatment of medically unexplained cough, the American College of Chest Physicians (CHEST) recommended to replace the use of the terms habit cough and psychogenic cough with the terms tic cough and somatic cough syndrome, respectively. For the remainder of this report, I will be using the newly recommended terminology to refer to these conditions. Moreover, it was recommended that a tic cough diagnosis be made when the patient manifests the core clinical features of tics that include suppressibility, distractibility, suggestibility, variability, and the presence of a premonitory sensation. The diagnosis of somatic cough syndrome can only be made after an extensive evaluation has been performed that includes ruling out tic disorders and uncommon causes (Vertigan et al. 2015).

2. THE CLINICAL CASE

Alyssa is a 12-year old female who was hospitalized for 3-week history of sudden onset cough that occurred at high frequency and was characteristically loud and barky. The cough was unrelenting, occurring 3–5 times per minute only while awake. It was not precipitated by any known factors nor were there alleviating factors. She could not voluntarily suppress the cough.

About eight weeks prior to admission, she and other family members had an upper respiratory tract infection (URI) with cough which resolved spontaneously within a week. She started to exhibit the presenting cough 4 weeks later.

Alyssa had long standing history of waxing and waning mild motor and vocal tics. In addition, she struggled with symptoms of generalized anxiety that were of moderate severity. She has not had previous medication trials or psychiatric hospitalizations.

The medical evaluation did not reveal an etiology. It included a complete physical examination, a neurological and an ENT examination, comprehensive biochemical laboratory studies that included a throat swab for streptococcal infection and antistreptolysin O and antideoxyribonuclease B titers that were negative.

Due to the pre-existing tic disorder, Alyssa's repetitive cough sound was initially treated as a vocal tic. As a result of the symptom severity and the high level of associated distress, she was started on haloperidol 0.5 mg twice daily.

During the hospitalization, Alyssa started to exhibit increasing physical dependence on the unit staff and complained of mobility related difficulties such as gait disturbances. She was assessed by the neurology team and no organic cause for her complaints was found. She also had an ENT assessment that was normal.

She reported that she was a very good student who had some difficulty making friends. She said that she had periods of feeling "sad" and crying easily, but could not identify any recent stressful event. The frequency of the cough decreased moderately during the hospitalization. However, Alyssa continued to exhibit high levels of help-seeking and dependent behavior. With much support, education and encouragement, she was able to manage her needs and only seek help when appropriate. She was discharged home with outpatient psychiatric follow-up.

3. DISCUSSION

Several conditions were considered as an explanation for Alyssa's symptoms, including a tic disorder, PANDAS (pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections), somatic cough syndrome and conversion disorder.

Given the recent history of upper respiratory tract infection, the possibility of PANDAS was considered. Alyssa's upper respiratory tract infection is not described as a typical streptococcal infection. In this case, antistreptolysin O and antideoxyribonuclease B titers as well as a throat swab for streptococcal infection were all negative. However, typically the infection occurs several weeks prior to symptoms and physical signs of streptococcal disease are absent (Hong et al. 2008).

In the case of Alyssa, it became increasingly clear over the course of the out-patient follow up that her gait disturbance and other neurological symptoms were consistent with a conversion disorder diagnosis. Conversion disorder is characterized by the presence of one or more neurological symptoms that cannot be explained by a known neurological or medical disorder. The diagnosis requires association of psychological factors with the initiation or exacerbation of the symptoms. Up to 5–15% of psychiatric consultations in a general hospital have been reported as conversion disorder (Stein et al. 1999). Alyssa described school-related stressors that preceded the onset of the symptoms. Moreover, both the neurological symptoms and the cough were more noticeable when she was in the presence of others. Psychotherapy is the mainstay of treatment for conversion disorder. The goal of psychotherapy is to identify relevant psychiatric and psychosocial stressors, relieve emotional stress and assist the patient in coping with future stressful events. Antidepressants or anxiolytics may be useful for specific target symptoms, especially if there are co-morbid psychiatric conditions. Family therapy, parent guidance, hypnotherapy, relaxation therapy, and biofeedback have also been proven to be helpful. (Hong et al. 2008).

In light of these findings, the diagnosis of somatic cough syndrome appeared more appropriate for the understanding of Alyssa's repetitive cough. As a result, the pharmacological treatment with haloperidol was gradually withdrawn. This medication appeared to offer only modest benefit. The focus of the treatment was shifted to individual supportive counseling and parent psychoeducation. Over the next four weeks, Alyssa's cough and neurological symptoms showed gradual significant improvement and she was able return to school.

Somatic cough syndrome tends to disappear during sleep suggesting a psychogenic etiology (Cortes et al. 2014). In addition, pediatric patients often present with symptoms of conversion disorder that are associated with psychosocial stressors and extremely worried parents (de Jongste and Shields, 2003). Due to the complex psychological nature of the symptom and high level of psychiatric comorbidity, a combination of interventions is often utilized including reassurance, counseling, relaxation techniques, supportive psychotherapy, and medications (tranquilizers, anxiolytic, and antidepressants). The majority of patients receiving these treatments (93%) tend to show improvement in cough. (Haydour et al, 2014).

4. CONCLUSION

Although somatic cough syndrome (psychogenic cough) is not rare, very few detailed descriptions are available in published reports. In most cases, the diagnosis is delayed several weeks to several months because physicians do not know about this psychogenic entity (Bhatia et al. 2002). As evident from this case, children with somatic cough syndrome often exhibit symptoms of conversion disorder. Because these patients are highly suggestable, the treatment team needs to establish a unified management approach to avoid confusion (Stein et al. 1999).

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