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LETTER TO THE EDITOR

Diagnosing somatic cough syndrome in a 13-year-old boy

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Dear Editor,

Cough is among the most common symptoms prompting patients to seek medical attention. It may be triggered by a range of factors, including infections, irritants, gastroesophageal reflux disease (GERD), and the use of angiotensin-converting enzyme (ACE) inhibitors (1). The broad spectrum of potential etiologies presents a diagnostic challenge, and despite thorough evaluation, a definitive cause cannot be identified in a substantial proportion of chronic cough cases (2). Among the differential diagnoses, psychogenic factors must also be considered, especially in patients with a persistent dry cough unresponsive to conventional treatments. According to the literature, 3.02% of chronic coughs in the general population are of psychiatric origin (3), while this rate is reported to be 5.5% in the pediatric population (4). This article presents a case of refractory cough that developed after neurosurgical intervention for a brain abscess and was ultimately diagnosed as somatic cough syndrome. The case highlights the diagnostic challenges involved and underscores the importance of considering psychological etiologies.

Our case involves a 13-year-old male, an eighth-grade student, who was referred to our clinic due to a persistent, nonproductive cough that had been ongoing since November 2024. His medical history included hospitalization in August 2024 for a brain abscess and meningitis following an accident, which required four neurosurgical procedures, including the placement of a ventriculoperitoneal (VP) shunt.

Following these interventions, he developed a chronic cough that led to frequent primary care visits. Treatments including antibiotics and inhalers were administered under the assumption of an infectious origin; however, no clinical improvement was observed. The patient was subsequently evaluated by specialists in otolaryngology, pediatric infectious diseases, pulmonology, allergy, and neurology, none of whom identified an organic cause for the cough.

With suspicions of a psychogenic etiology, he was referred to our department. The cough, described as dry and persistent throughout the day, began shortly after his neurosurgical procedures. He reported a throat discomfort preceding a compelling urge to cough, followed by repetitive bouts lasting about five seconds. The coughing episodes—likened to a "barking" sound—occurred every few minutes, and the patient reported being unable to suppress them. Notably, there were no coughing episodes during sleep, and his sleep quality remained unaffected.

The cough significantly impaired daily functioning, especially during classroom activities and social interactions. Physical activity and eating did not appear to influence the frequency, but emotional stressors—such as arguments with his sibling—were reported to exacerbate the symptoms. No diurnal variation or other fluctuation in severity was noted.

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Information obtained from the patient and his family indicated that, prior to the accident, he was a cheerful and active child who had good relationships with both peers and family members, though he frequently argued with his younger sibling. His father was described as authoritarian and placed a high value on academic achievement. While the patient enjoyed spending time with friends at school and did not experience bullying, he often expressed boredom with academic subjects.

Following the accident and subsequent surgical interventions, it was reported that the patient initially spent most of his time resting at home. After returning to school, he did not experience interpersonal difficulties with peers; however, he reported discomfort and embarrassment due to his persistent cough, which led to a reluctance to attend school. Although his family continued to send him, they had become less focused on his academic performance than before. At home, he received increased attention, and as his coughing episodes intensified during conflicts with his sibling, the family was perceived to take his side in these disputes.

Developmental milestones were reportedly achieved on time. He was under ongoing follow-up for a ventricular septal defect (VSD) and the VP shunt. Academically and socially, he was functioning well. Psychiatric assessment revealed a euthymic mood, age-appropriate cognitive function, and normal psychomotor activity. Frequent coughing was observed during the interview. Although no prominent symptoms were observed in the Revised Children's Anxiety and Depression Scale (and Subscales) (RCADS) completed by the patient, generalized anxiety and panic scores associated with the trauma indicated subclinical levels of anxiety. No additional psychiatric condition was detected during the clinical interview with the patient or in the information provided by the family.

The Wechsler Intelligence Scale for Children - Revised (WISC-R) revealed a verbal score of 90, a performance score of 94, and a total score of 91. During the test, it was observed that the child's coughing persisted and intensified during more challenging questions and tasks. The family demonstrated a high level of concern and attentiveness during consultations.

Further evaluations by pediatric neurology, pulmonology, and otolaryngology again failed to identify an underlying medical cause. Considering the patient's history of trauma, potential secondary gains, and the exclusion of other medical and psychiatric conditions, a diagnosis of somatic cough syndrome was made. Psychoeducation was provided to the patient and his family to increase awareness, and family therapy was collaboratively planned to help regulate family dynamics and facilitate the extinction of maladaptive behaviors.

Written informed consent was obtained from the patient and his parents for publication of this case report.

Somatic cough syndrome—formerly referred to as psychogenic, habit, or tic cough—is characterized by the absence of an identifiable medical cause and resistance to standard treatments. Literature suggests that a harsh, barking-type cough with no nocturnal symptoms strongly supports a psychogenic origin (5). However, similar cough patterns may also occur in conditions such as GERD or bronchiolitis (6). Therefore, the clinical presentation must be interpreted within a broader diagnostic context.

In this case, the dry, barking nature of the cough and its absence during sleep prompted a psychiatric referral. Somatic cough syndrome is a diagnosis of exclusion, requiring a thorough rule-out of organic causes. However, the diagnostic process is often prolonged, involving numerous consultations, investigations, and ineffective treatments—as seen in this case, including the use of antibiotics.

The patient's history of neurosurgery for a brain abscess complicated the clinical picture. Sequelae from prior illnesses or surgical interventions are typically prioritized in the differential diagnosis, which can delay consideration of a psychogenic cause. Early recognition of somatic cough syndrome is crucial to prevent unnecessary interventions and reduce healthcare costs.

Recent literature has favored the term "somatic cough syndrome" over "psychogenic cough," differentiating it from tic cough. This shift aligns with:

1. The exclusion of the term "psychogenic" in the DSM-5;
2. The inclusion of somatic symptom disorder as the most appropriate classification;
3. Clinical evidence that these coughs lack features characteristic of tic disorders (6).

In this case, the cough emerged after a traumatic stressor, persisted for five months, lacked the waxing-and-waning pattern typical of tics, was not suppressible, and conferred secondary gains related to family dynamics. These features support a diagnosis more consistent with a somatic symptom and related disorders rather than a tic disorder. Recognizing this distinction is essential when delivering psychoeducation and formulating treatment plans.

In other case reports presented in the literature (7, 8), coughs of psychiatric origin are frequently overlooked, and numerous medications and diagnostic tests are often administered before a correct diagnosis is made. In one case similar to ours, the patient did not receive an accurate diagnosis for over a year, consulted multiple specialists, used various medications including antihistamines and antibiotics, and underwent several diagnostic procedures (7). We believe that increasing physicians' awareness of somatic cough syndrome would facilitate earlier diagnosis and contribute to the development of standardized diagnostic and treatment algorithms.

Awareness of somatic cough syndrome is vital for early recognition and to prevent unnecessary and prolonged treatment efforts. Differentiating somatic cough syndrome from tic cough is essential for appropriate management and follow-up. Continued research is needed to improve diagnostic clarity and treatment outcomes.

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