



## Conversion disorder: An integrated care approach

Knowing how the diagnosis is made and the condition is managed effectively can help FPs fulfill their role in the multifaceted care of these patients.

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### > THE CASE

Janice M\* presented to the emergency department (ED) with worsening slurred speech. The 55-year-old patient's history was significant for diabetes; hypertension; depression; sleep apnea; multiple transient ischemic attacks (TIAs) thought to be stress related; and left lower-extremity weakness secondary to prior infarct. Ms. M had been to the hospital multiple times in the previous 2 to 3 years for similar symptoms. Her most recent visit to the ED had been 2 months earlier.

In the ED, the patient's NIH stroke score was 1 for the presence of dysarthria, and a code for emergency stroke management was initiated. Ms. M was alert and oriented x 3, with no focal motor or sensory deficits noted. Computed tomography (CT) and CT angiography were negative for any acute abnormality. Throughout the course of the ED visit, her NIH score improved to 0. Ms. M exhibited staccato/stuttering speech, but it was believed that this would likely improve over the next few days.

According to the hospital neurologist, the ED work-up suggested either a TIA, stress-induced psychiatric speech disorder, or conversion disorder. The patient was discharged home in stable condition and was asked to follow up with the outpatient neurologist in 1 week.

Ms. M was seen approximately 2 weeks later in the outpatient neurology stroke clinic. Her symptoms had resolved, and she did not report any new or worsening symptoms. An outpatient stroke work-up was initiated, including magnetic resonance imaging (MRI) of the brain, echocardiography, and measurement of low-density lipoprotein and hemoglobin A1C; all results were unremarkable. Given the timeline for symptom improvement and results of the work-up, the patient was given a diagnosis of conversion disorder. Ms. M was encouraged to follow up with her primary care physician (PCP) for further medical management.

### ○ HOW WOULD YOU PROCEED WITH THIS PATIENT?

\* *The patient's name has been changed to protect her identity.*

### WHAT IS CONVERSION DISORDER, AND HOW COMMON IS IT?

According to the *Diagnostic and Statistical*

*Manual of Mental Disorders, Fifth Edition, text revision*, conversion disorder (also known as *functional neurological symptom disorder*) is

➤ One study indicated that physicians identified medically unexplained symptoms as the main presenting problem for nearly 20% of patients in a primary care setting.

characterized as a somatic symptom and related disorder.<sup>1</sup> The prominent feature shared among disorders in this category is the presence of somatic symptoms that are associated with distress and impairment.

In conversion disorder, the focus is on symptoms that are neurologic in nature but are not due to underlying neurologic disease and are incongruent with typical patterns of presentation for any neurologic condition. Patients with conversion disorder may present with motor symptoms (eg, weakness, paralysis, tremor, dystonia), altered sensory or cognitive function, seizure-like symptoms, alterations in speech, or changes in swallowing.<sup>1,2</sup>

■ **For a diagnosis of conversion disorder**, the following criteria must be met<sup>1</sup>:

- The patient has 1 or more symptoms of altered voluntary motor or sensory function.
- Symptom presentation is incongruent with recognized neurologic or medical disease or conditions.
- Symptoms are not better explained by another medical or mental health condition.
- There is significant distress or impairment in functioning due to symptoms or the deficit.

■ **The etiology of conversion disorder** has not been firmly established. While the literature suggests that psychological stressors play a role,<sup>3,4</sup> an effort also has been made to better understand the underlying neural and biological basis. Specifically, studies have utilized brain imaging to explore brain pathways and mechanisms that could account for symptom presentation.<sup>5,6</sup>

■ **Prevalence rates** for conversion disorder vary depending on the population studied. While it is estimated that 5% of patients in a general hospital setting meet full criteria for conversion disorder,<sup>7</sup> higher rates may exist in specialty settings; 1 study found that 30% of patients in a neurology specialty clinic exhibited symptoms that were medically unexplained.<sup>8</sup>

In primary care, prevalence of conversion disorder can be difficult to pinpoint; however, 1 study indicated that physicians identified medically unexplained symptoms as the main

presenting problem for nearly 20% of patients in a primary care setting.<sup>9</sup> Therefore, it is important for family physicians (FPs) to be familiar with the assessment and treatment of conversion disorder (and other disorders in which medically unexplained symptoms may be at the core of the patient presentation).

## THE DIFFERENTIAL: NEUROLOGIC AND PSYCHIATRIC CONDITIONS

Patients with conversion disorder may present with a variety of neurologic symptoms that can mimic those of organic disease. This can pose a diagnostic challenge, increase the chance of misdiagnosis, and delay treatment.

Motor symptoms may include paralysis, gait disturbance, dysphagia, or aphasia. Patients also may have sensory symptoms, such as blindness, deafness, or anesthesia.<sup>10,11</sup> As a result, it is important to rule out both urgent neurologic presentations, such as TIA, acute stroke, and brain tumor, and other chronic neurologic conditions, including multiple sclerosis, myasthenia gravis, and epilepsy.<sup>11,12</sup>

■ **Multiple sclerosis** will demonstrate characteristic lesions on MRI that differentiate it from conversion disorder.

■ **Myasthenia gravis** is distinguished by positive findings on autoantibodies testing and on electrophysiologic studies.

■ **Epilepsy.** Patients with conversion disorder may present with unresponsiveness and abnormal movements, such as generalized limb shaking and hip thrusting, that mimic an epileptic seizure. In contrast to epileptic seizures, psychogenic nonepileptic seizures may last longer, symptoms may wax and wane, and patients generally do not have bowel or bladder incontinence or sustain injury as they would during an actual seizure.<sup>12</sup>

There are several psychiatric/psychosocial conditions that also should be considered in the differential diagnosis of conversion disorder.

■ **Somatic symptom disorder**, like conversion disorder, produces somatic symptoms that can cause significant distress for patients. The difference in the 2 conditions is that symptoms of somatic symptom disorder may be compatible with a recognized neurologic or general medical condition, whereas in conver-

sion disorder, the symptoms are not consistent with a recognized disease.<sup>1,12</sup>

■ **Factitious disorder**, similar to conversion disorder, can involve neurologic symptoms that are not attributed to disease. However, patients with factitious disorder deliberately simulate symptoms to receive medical care. A thorough clinical interview and physical exam can help to distinguish conversion disorder from factitious disorder.

■ **Malingering** is not a psychiatric condition but a behavior that involves intentionally feigning symptoms for the purpose of personal or financial gain. There is no evidence that patients with conversion disorder simulate their symptoms.<sup>12,13</sup>

## NEGATIVE RESULTS AND POSITIVE SIGNS POINT TO THE Dx

Conversion disorder is not a diagnosis of exclusion. Diagnosis requires detailed history taking and a thorough neurologic exam. Laboratory testing and neuroimaging are also important, and results will have to be negative to support the diagnosis.

Neurologic deficits with conversion disorder do not follow a known neurologic insult.<sup>14</sup> There are many tests that can be used to distinguish functional symptoms vs organic symptoms. Two of the most well-known tests are the Hoover sign and the abductor sign, which will be positive in conversion disorder. Both can be performed easily in an outpatient setting.

■ **The Hoover sign** is considered positive when there is weakness of voluntary hip extension in the presence of involuntary hip extension during contralateral hip flexion against resistance. According to a meta-analysis of multiple studies of patients with conversion disorder, the overall estimated sensitivity of this test is 94% and the specificity, 99%.<sup>15</sup>

■ **The abductor sign** follows the same principle as the Hoover sign: When the patient abducts the nonparetic leg, both the nonparetic and “paretic” leg are strong. When the patient abducts just the “paretic” leg, both legs become weak.<sup>16</sup>

■ **Other symptom evaluations.** For patients who have functional seizures, video electroencephalography is helpful to distinguish

functional seizures from “true” seizures.<sup>17,18</sup> In conversion disorder, functional dysarthria normally resembles a stutter or speech that is extremely slow with long hesitations that are hard to interrupt.<sup>18</sup> Dysphonia and functional dysphagia are also very common functional symptoms. Usually after extensive work-up, no organic cause of the patient’s symptoms is ever found.<sup>18</sup>

## TREATMENT REQUIRES AN INTEGRATED TEAM APPROACH

Treatment for conversion disorder can be difficult due to the complex and not fully understood etiology of the condition. Due to its multifaceted nature, an integrated team approach can be beneficial at each stage, including assessment and intervention.

■ **Explain the diagnosis clearly.** An essential initial step in the treatment of conversion disorder is careful explanation of the diagnosis. Clear explanation of the terminology and presentation of conversion disorder may prevent the patient from misinterpreting their diagnosis as a suggestion that they are feigning or malingering symptoms or feeling that their symptoms or concerns are being dismissed.<sup>2</sup> Understanding the condition can help improve the likelihood of the patient accepting the treatment plan and help decrease the likelihood of unnecessary testing, health care visits, and consultations. Developing a strong rapport with the patient is key when explaining the diagnosis.

■ **Recommend cognitive behavioral therapy (CBT).** In a meta-analysis of 15 randomized controlled trials, CBT significantly reduced somatic, anxious, and depressive symptoms and improved physical functioning in patients with somatoform disorders and medically unexplained symptoms.<sup>19</sup> Another study, utilizing a case series, demonstrated significant improvement in social, emotional, and behavioral functioning in children and adolescents with functional neurologic symptoms (conversion disorder) post-CBT intervention.<sup>20</sup>

Given that research supports CBT’s effectiveness in the management of conversion disorder, it is beneficial to engage a behavioral health professional as a part of the treatment team to focus on factors such as stress manage-



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ment, development of coping skills, and treatment of underlying psychiatric conditions.

■ **Consider these other options.** The addition of medication management can be considered for patients with comorbid psychiatric disorders. Evidence suggests that physical therapy is helpful in the treatment of motor and gait dysfunction seen in conversion disorder.<sup>21,22</sup> The role of hypnosis in the management of conversion disorder has also been studied, but more randomized clinical trials are needed to further explore this treatment.<sup>2,23,24</sup>

## THE FP'S ROLE IN COORDINATION OF CARE

Conversion disorder can be challenging to diagnose and often involves a multidisciplinary approach. Patients with conversion disorder may see multiple clinicians as they undergo evaluation for their symptoms, but they usually are referred back to their PCP for management and coordination of care. Thus, the FP's understanding of how the condition is diagnosed and appropriately managed is beneficial.

Open and effective communication among all members of the health care team can ensure consistency in treatment, a strong patient-provider relationship, favorable prognosis, and prevention of symptom relapse. FPs, by establishing a good rapport with patients, can help them understand the condition and the mind-body connection. Once other diagnoses have been ruled out, the FP can provide reassurance to patients and minimize further diagnostic testing.

The prognosis of conversion disorder is associated with symptom duration<sup>25</sup>; thus, consultation between FPs and mental health providers is essential. The FP also can be integral in the recognition of psychiatric comorbidities, such as anxiety and depression, helping to ensure that these conditions also are treated appropriately.<sup>25,26</sup>

## ► THE CASE

Ms. M was referred to a neuropsychologist for further assessment, and the diagnosis of conversion disorder was confirmed. She was then referred to a family medicine behavioral

health psychologist for CBT. The initial consult indicated that psychological stressors were contributing to symptoms, and Ms. M was diagnosed with depression and anxiety as well as conversion disorder.

Treatment started with patient education. The treatment framework was carefully explained to Ms. M, with a focus on identifying possible symptom triggers, helping her build a more effective stress response, increasing skills to more effectively manage stressors, and managing underlying psychiatric disorders (ie, depression, anxiety).

Ms. M continued regular visits with the family medicine behavioral health psychologist for CBT and followed up with her PCP as needed to manage chronic health conditions and stroke risk factors. The patient was able to implement skills discussed in treatment sessions, including identifying triggers and implementing coping skills (eg, managing negative thoughts that contribute to symptoms, setting boundaries) to manage stressors.

Her depressive and anxious symptoms improved, as indicated by symptom measurement tools and self-report. The frequency and severity of episodes of slurred speech and muscle weakness decreased, and the patient reported only 1 ED visit related to speech difficulties in the 2 years while following up with the behavioral health psychologist. **JFP**

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## GUEST EDITORIAL

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connection with the teams with which I worked. I think about the residents whose training shifted suddenly to full-time COVID, the nurses who learned new things every weekend for so many months, and everyone who went out on a limb to do the right thing.

■ **We provided care without bureaucracy.** I wish medicine could leave the bureaucracy behind along with the emergency. It was so much easier to practice medicine when we knew that the testing and treatment were covered, without “we’ll see” or “it depends on your insurance.” Telehealth is probably here to stay, thanks to widespread uptake by patients and clinicians alike during the pandemic. My wish is that we can make it as easy as possible to use going forward, instead of choosing to return to a more restricted and difficult path.<sup>3,4</sup>

Family physicians have much to be proud of. We can look back on the COVID-19 public health emergency as a time when we absorbed a huge amount of rapidly changing information and showed our adaptability to a frightening and uncertain environment. We

are not returning to the office, as so many Americans are these days, because we never left the many settings where family physicians practice. We remained at work during the emergency and we took care of our patients.

When the next emergency is declared—whether it be national or local—we will once again be there for our patients. **JFP**

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