

### LESSONS LEARNED AT THE INTERFACE OF MEDICINE AND PSYCHIATRY

The Psychiatric Consultation Service at Massachusetts General Hospital (MGH) sees medical and surgical inpatients with comorbid psychiatric symptoms and conditions. Such consultations require the integration of medical and psychiatric knowledge. During their thrice-weekly rounds, Drs. Roffman and Stern discuss the diagnosis and management of conditions confronted. These discussions have given rise to rounds reports that will prove useful for clinicians practicing at the interface of medicine and psychiatry.

This is the first in a series of 3 rounds reports that focus on patients with neuropsychiatric symptoms, which can be especially challenging to diagnose and manage effectively. We hope to provide practical insights for primary care providers who encounter these common symptoms.

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# Conversion Disorder Presenting With Neurologic and Respiratory Symptoms

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**H**ave you ever been faced with medical or neurologic symptoms in a patient who, despite a thorough workup, does not appear to have a medical or neurologic condition that explains those symptoms? Have you wondered how to address (and treat) these symptoms when you suspect that they may reflect a psychological or psychiatric etiology? If you have, then the following case vignette (of a woman presenting to the emergency room with apparent convulsions and apnea) should provide the forum for answers to these and other questions related to conversion disorders.

### Case Report

Ms. A, a 35-year-old divorced woman with a history of severe childhood asthma, presented to the emergency room with a week-long complaint of jerking movements (which began in her left shoulder and then spread down her left arm and both legs). She maintained full awareness during and after these episodes, which lasted for a minute or 2, but stated that she had developed difficulty walking because of them. The episodes were often immediately followed by 10 to 15 seconds of gagging and apnea. Although members of her family (who accompanied her to the emergency room) were very concerned that these new problems could signal a serious medical illness, Ms. A. appeared neither alarmed nor anxious. She denied any significant psychiatric history but did recall receiving some counseling around the time of the death (5 years ago that month) of her 3-year-old daughter (from Tay-Sachs disease). When her jerking movements emerged, Ms. A moved in with her parents. Her neurologic and general physical examinations, as well as her laboratory assessment (including head imaging, an electroencephalogram (EEG), and basic laboratory studies), were unremarkable. The psychiatric consultant felt that Ms. A met DSM-IV criteria for conversion disorder.

### What Are Conversion Disorders and Where and How Do They Present?

Conversion disorders are characterized by a sudden loss or change in physical function (in the absence of an underlying medical etiology) as a consequence of psychological distress. Presenting symptoms often appear neurologic and may involve paralysis, aphonia, ataxia, convulsions, or a loss of vision or another sensory modality. In the case of Ms. A, new jerking movements were followed by a brief period of gasping and apnea.

Symptoms associated with conversion disorders are not under the individual's voluntary control, although the severity of the symptoms may be modulated by the patient under certain circumstances (e.g., intense concentration, or, in the case of weakness, 1 second of "full

effort"). When Ms. A was interviewed in the absence of family members, the frequency and severity of her symptoms diminished, especially when the interviewer focused on unrelated aspects of the medical and social history.

Given the sudden loss of function and the physical nature of the complaints, a patient with a conversion disorder is much more likely to present to an emergency room or to his or her primary care physician than to a psychiatrist. As in the case of Ms. A, such a patient is less concerned about the emergence of these symptoms (i.e., *la belle indifférence*) than are family members or friends who are present at the time of the symptoms. Although conversion disorders present with equal gender frequency in children, among adults these disorders are 2 to 5 times more likely to occur in women.

### What Are the Causes of Conversion Disorders?

As the name implies, conversion disorders reflect the translation of psychological distress into physical symptoms. There is usually a relationship between a stressor and the particular symptom or set of symptoms expressed by the patient. Moreover, symptoms are often connected to a medical condition that previously affected the patient. As a result of the conversion symptoms, a patient may gain the attention and support of loved ones and may be removed from situations that require his or her responsibility.<sup>1</sup>

In the case of Ms. A, the constellation of her symptoms may have been related to (and triggered by) the anniversary of her child's death, which was clearly a significant source of emotional trauma. Her convulsions and inability to walk rendered her dysfunctional (immobile) and dependent on her parents' care; this may have paralleled some of the symptoms experienced by her daughter in the end stages of her illness. Ms. A's gagging and apnea resulted in her gaining urgent medical attention. When asked about her history of hospitalizations for childhood asthma, she reported that she "always felt better" when doctors and nurses took care of her. Thus, one may interpret Ms. A's symptoms as a reflection of residual grief that was both suffocating and paralyzing; unable to tolerate this burden, she projected a need for help (i.e., much like a child who is incapacitated by illness).

### How Are Conversion Disorders Differentiated From Medical or Neurologic Problems?

It is important to note that symptoms initially diagnosed as conversion disorder are ultimately ascribed to an underlying medical etiology in up to 30% of cases.<sup>2</sup> For example, nonconvulsive seizures (also called pseudoseizures) are highly comorbid with true epilepsy<sup>3</sup>; a patient who is interictal or who has subcortical seizure foci may initially present with normal-appearing EEGs. This example points to the necessity of conducting a thorough

medical and neurologic evaluation, even if a conversion disorder is the suspected diagnosis.

That being said, elements of the physical examination can strongly suggest psychiatric causes. Certain patterns of convulsive activity and neurologic symptoms (e.g., bilateral convulsions in the presence of full alertness, fluent speech during and after the abnormal activity [as was the case with Ms. A], motor activity that crosses the midline, and inconsistencies in the sequence of abnormal motions) are inconsistent with a true seizure disorder. Clinicians may observe a patient who presents with weakness or paralysis but who has full strength when distracted; a patient with functional blindness may react to a sudden, menacing visual stimulus.<sup>4</sup>

### What Psychiatric Conditions May Overlap With Conversion Disorders?

Conversion is one of several somatoform disorders; these are disorders that are characterized by bodily symptoms suggestive of a physical disorder but are inconsistent with demonstrable organic causes. Other somatoform disorders include pain disorder (which presents with intractable and severe pain that cannot be attributed to medical causes) and somatization disorder (which is a syndrome of multiple somatic complaints [respiratory, sexual, neurologic, and gastrointestinal] associated with medical help-seeking). For each of the somatoform disorders, symptoms are not (or are minimally) under volitional control.<sup>5</sup>

Factitious illness and malingering are also characterized by unexplainable symptoms, but for these disorders, the production of symptoms is volitional. A patient with Munchausen's syndrome, the prototypical factitious disorder, consciously simulates or feigns medical (or psychiatric) conditions with the primary goal being to become a patient and gain medical attention. Such a patient may have a history of multiple unnecessary surgical procedures, counterfeit laboratory results, and presentations to multiple hospitals using differing forms of identification. In contrast to having a goal of seeking health care, a patient with malingering falsifies his or her condition for reasons of secondary gain, such as avoiding legal proceedings or obtaining narcotic medications.<sup>5</sup>

### Once Identified, How Are Conversion Disorders Managed Effectively?

The direct confrontation of a patient when there is a lack of evidence to support a medical diagnosis is usually counterproductive. Rather, emphasizing the good news of negative laboratory results and expressing a confident optimism that the symptoms will improve (as they do in up to 90% of patients with conversion disorder)<sup>6</sup> can provide relief to both the patient and concerned family members. Spelling out a gradual sequence of events that would be

expected in a patient's recovery can in and of itself provide suggestions for how a patient may improve. For Ms. A, the treatment team achieved this effect by noting that although disconcerting, the episodes of apnea were not dangerous (as evidenced by the lack of desaturation or respiratory compromise). They legitimized Ms. A's neurologic complaints without condescension by stating that her "body was sending her a message," even if, despite their best efforts, they couldn't understand that message through conventional neurologic testing. By detailing a "mini-rehab" program of a gradual return to walking and by scheduling a medical follow-up appointment, they provided her a means for symptom improvement.

Once the presenting physical problem has improved, it becomes essential to address the underlying psychological stressor. While continuing to use the same nonconfrontational frame of reference, it can be useful to suggest a trial of counseling or psychotherapy to help the patient cope with *all* of the stressors in his or her life, including those engendered by his or her recent physical disability. Such a referral can provide an opening for further exploration, and ultimately for resolution, of the intrapsychic conflict that underlies the conversion symptoms, and in doing so, prevent their relapse. While psychopharmacology has not been proven effective for conversion disorder per se, treatment of underlying mood or anxiety disorders (which are often comorbid) may facilitate improvement of conversion symptoms.

### What Is the Prognosis for Patients With Conversion Disorder?

Patients who present with conversion disorders following acute onset of disease, or immediately following an acute stressor, stand the best chance of recovery, especially when psychotherapy is initiated quickly. While symptoms of paralysis, aphonia, or blindness tend to improve, those of tremor or seizure are often more refractory.<sup>7</sup> For hospitalized patients with conversion disorder, 50% to 90% will have recovered by the time of discharge; however, 20% to 25% may relapse within 1 year.<sup>5</sup> For primary care physicians, this underscores the importance of maintaining a good alliance with conversion disorder patients, as well as of encouraging psychiatric follow-up.

### REFERENCES

1. Maldonado JR. Conversion disorder. In Phillips KA, ed. *Somatoform and Factitious Disorders*. Washington, DC: American Psychiatric Association; 2001:95–128

2. Lazare A. Conversion symptoms. *N Engl J Med* 1981;305:745–748
3. Blumer D, Montouris G, Hermann B. Psychiatric morbidity in seizure patients on a neurodiagnostic monitoring unit. *J Neuropsychiatry Clin Neurosci* 1995;7:445–456
4. Shaibani A, Sabbagh MN. Pseudoneurologic syndromes: recognition and diagnosis. *Am Fam Phys* 1998;57:2485–2494
5. Barsky AJ, Stern TA, Greenberg DB, et al. Functional somatic symptoms and somatoform disorders. In: Stern TA, Fricchione GL, Cassem NH, et al, eds. *Massachusetts General Hospital Handbook of General Hospital Psychiatry*, 5th ed. Philadelphia, Pa: Elsevier; 2004:269–291
6. Folks DG, Ford CV, Regan WM. Conversion symptoms in a general hospital. *Psychosomatics* 1984;25:285–295
7. Brusco C, Geringer E. Somatoform disorders. In: Stern TA, Herman JB, eds. *Massachusetts General Hospital Psychiatry Update & Board Preparation*, 2nd ed. New York, NY: McGraw-Hill; 2004:137–144

### ANNOTATED BIBLIOGRAPHY

- Bourgeois JA, Chang CH, Hilty DM, et al. Clinical manifestations and management of conversion disorders. *Curr Treat Options Neurol* 2002;4:487–497  
 –The authors describe the diagnosis and treatment of conversion disorders from the neurologist's perspective, placing emphasis on the necessity of thorough neurologic evaluation, vigilance for psychiatric comorbidities, and comanagement with psychiatric providers.
- Krem MM. Motor conversion disorders reviewed from a neuropsychiatric perspective. *J Clin Psychiatry* 2004;65:783–790  
 –This recent article provides a succinct review of the epidemiology, pathophysiology, presentation, differential diagnosis, treatment, and prognosis of conversion disorder. The author also focuses on the importance of diagnostic validity and reviews the empirical evidence supporting diagnostic and treatment strategies.
- LaFrance WC Jr, Devinsky O. The treatment of nonepileptic seizures: historical perspectives and future directions. *Epilepsia* 2004;45(suppl 2):15–21  
 –Nonepileptic seizures are among the most frequently encountered and best described of the conversion disorders. This review discusses the diagnosis and treatment of nonepileptic seizures, summarizing 100 years of research in this area.
- Silver FW. Management of conversion disorder. *Am J Phys Med Rehabil* 1996;75:134–140  
 –The author describes several important considerations (such as avoiding confrontation or minimization, providing a benign model to account for symptoms, and creating an expectation of recovery) in the management of patients with conversion disorders. He also cites 4 case examples to illustrate these concepts.
- Smith GC, Clarke DM, Handrinos D, et al. Consultation-liaison psychiatrists' management of somatoform disorders. *Psychosomatics* 2000;41:481–489  
 –Encounters with 4401 patients on an inpatient psychiatry consult-liaison service were reviewed, with attention to the incidence, psychiatric comorbidities, and management of somatoform disorders. Somatoform disorders were diagnosed in 2.9% of patients and considered in the differential diagnosis for another 3.4%.
- Vuilleumier P, Chicherio C, Assal F, et al. Functional neuroanatomical correlates of hysterical sensorimotor loss. *Brain* 2001;124:1077–1090  
 –Conversion symptoms may have neurobiological underpinnings, as suggested by this functional neuroimaging study. Patients with active conversion symptoms exhibited decreased brain activation in the thalamus and basal ganglia contralateral to the side of the functional impairment. Activity in these regions normalized after conversion symptoms resolved. Moreover, subjects who initially had more pronounced activation deficits in the caudate nucleus were less likely to recover.