

CASES THAT TEST YOUR SKILLS

During a bad day at school, a 9-year-old girl suffers sudden lower-extremity paralysis. Does she have a medical condition, or do her family history and stresses at school and home point to a psychiatric cause?

The 'show-off' who couldn't walk

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PRESENTATION 3 O'CLOCK COMES EARLY

Miss T, age 9, presents with decreased sensation and motility in both legs. She cannot walk or stand.

Three days before, Miss T said she was consistently answering the teacher's questions correctly at school. Because of this, a classmate teased her by calling her a "show off." Soon after, Miss T began feeling weak and nauseous. The school nurse got a blood sugar reading of 68 mg/dL, slightly below the low-normal range.

Miss T's mother arrived and convinced her to eat crackers and drink juice. Her blood sugar rose to 139 mg/dL and she began to feel better. When Miss T tried to stand, however, her legs and feet felt weak. She had trouble standing without support and needed help walking even a short distance. The mother brought Miss T home from school early.

Over the next 2 days, Miss T's lower-extremity symptoms worsened. Her mother brought her to the pediatric emergency room.

Initial physical exam showed normal vital signs with no gross abnormalities. Neurologic exam revealed no lower-extremity masses, lesions, or deformities. Laboratory tests were normal. Cranial nerves were grossly intact. Right and left upper and lower extremities exhibited good tone, normal reflexes, and good strength against resistance. Miss T, however, said she could not feel sharp or dull objects against her lower legs.

ER pediatricians then called on the child psychiatry department to evaluate Miss T for possible psychiatric causes.

At intake, Miss T sits with her legs dangling from a stretcher. She is pleasant, articulate, and well-mannered. She spontaneously moves both legs and does not seem distressed when asked about her sudden disability. Her mood is euthymic, but she reports that constant teasing at school sometimes causes intense stress. She says that her sister sometimes "gets mean" with her but does not elaborate. She adds that she is sometimes sad

because her parents recently separated, but she denies resultant emotional effects.

No suicidal/homicidal ideations or psychotic symptoms are present. Miss T's thought process is logical and goal-directed. She is alert and oriented with good memory, language, concentration, and impulse control.

Neither Miss T nor her family has a significant psychiatric or medical history. Miss T has not been taking medications or over-the-counter supplements. Upon questioning, the mother denies that her daughter has been physically or sexually abused.

Despite a lack of positive neurologic findings, the neurology team recommends admission to rule out unseen medical problems.

This presentation suggests Miss T has:

- **Guillain-Barré syndrome**
- **a neuromuscular or intracranial problem**
- **a factitious or other psychiatric disorder**
- **a spinal cord tumor**



The authors' observations

Medical diagnosis.^{1,2} In Guillain-Barré syndrome, an infection usually precedes symptom onset, and maximum weakness is seen within 7 to 10 days. Respiration may be compromised, and weakness tends to spread throughout the body. Miss T's symptoms came on more rapidly, her breathing was normal, and weakness was confined to her legs and feet.

In neuromuscular junction disorders such as myasthenia gravis and Lambert-Eaton syndrome, symptoms are not as acute, fluctuate

throughout the day, and usually worsen with exertion. By contrast, Miss T's symptoms steadily worsened without provocation.

Muscular dystrophy and myopathy were ruled out because of Miss T's rapid symptom onset and lack of prior health problems. Dystrophy usually is seen in early childhood, affects the hip and girdle muscles, and progresses slowly. Myopathy symptoms usually are chronic and progressive, and associated medical disorders overshadow the muscle disease.

Patients with intracranial lesions may present with:

- symptoms of diffuse cerebral disease, such as mental impairment, headache, or seizures
- focal neurologic signs, such as aphasia or hemiparesis
- evidence of increased intracranial pressure, such as headache, vomiting, drowsiness, or papilledema.

Miss T had none of these.

Patients with spinal cord tumors usually have radicular pain, sensory/motor involvement, sphincteric dysfunction, and percussible back tenderness. Symptoms develop over weeks to months. **Psychiatric diagnosis.** Factitious disorder, malingering, somatization disorder, and conversion disorder (*Box*) also were considered:

- In factitious disorder, the patient exacerbates his or her symptoms to assume the sick role.
- Malingering patients have external motivations behind symptom fabrication.
- Somatization disorder involves multiple organ systems, and patients often are preoccupied with their symptoms.

Miss T's complaints were not consciously induced, external motivations were absent, a single organ system (musculoskeletal) was involved, and she appeared largely untroubled by her deficit.

Her presentation most closely fit the diagnosis of conversion disorder. Patients with this disorder complain of symptoms or deficits affecting volun-

tary muscles or of sensory function deficits that suggest a neurologic or medical condition. The symptoms' temporal relationship to a stressful event suggests psychological factors. Symptoms:

- are not intentionally produced
- cannot be attributed to an organic cause
- cause significant functional impairment
- are not limited to pain or sexual dysfunction
- cannot be explained by another mental disorder.

TREATMENT A MIRACULOUS RECOVERY

The pediatrics, child psychiatry, pediatric neurology, and physical medicine/rehabilitation departments treated Miss T. No organic cause of her symptoms was found; results of an MRI with contrast, EEG, and repeated lab tests were negative.

On day 3, Miss T started taking small steps on her own. Two days later, she walked without assistance; discharge was considered.

The hospital's social services department, however, discovered that the state child welfare agency had investigated Miss T's family for alleged child abuse/neglect years before but found no evidence.

Also, a school social worker had recently visited Miss T's family after receiving a complaint that an older sibling was allegedly hitting the younger ones. The social worker noticed that the kitchen door was padlocked; she speculated that the family was struggling financially and did not want the children to eat all the food. No other evidence of child maltreatment was found and the investigation was stopped. None of Miss T's lab results indicated malnutrition.

The girl was discharged after the mother agreed to allow a home health aide to monitor the children's well-being and a psychologist to perform neuropsychological tests on Miss T. Follow-up outpatient visits with the pediatric neurology, general pediatrics, and child psychiatry departments were also required.

Box 1

Conversion disorder: Prevalence and common features

Conversion disorder each year accounts for approximately 22 psychiatric cases per 100,000 overall.³ In the hospital setting, 5% to 14% of medical inpatient referrals for psychiatric evaluation result in conversion disorder diagnosis.³

Conversion disorder is seen in men and women but is more common in young women. Symptoms can occur at any age but are rare in children age < 7 and probably do not occur in children age < 4.³

Prevalence is higher in rural areas and among undereducated and low-income persons.^{3,4} Researchers also suggest that family history of conversion disorder contributes to symptom onset in offspring.⁴

Miss T's severe lower-extremity symptoms were possibly aggravated by:

- malnourishment at home
- school-related stress
- physical abuse/neglect at home

The authors' observations

Once we learned Miss T's family had been investigated for child neglect, we had to find out if her symptoms were an expression of maltreatment or were caused by psychological stressors at school. Definitive maltreatment never surfaced, and school stress was determined to be a minor factor.

Neglected children exhibit characteristics at different ages that might contribute to conversion symptom development (*Table*). Most

Table

Psychopathology of the neglected child

Age	Developmental difficulties
1 year	Insecure attachments
2 years	Easily frustrated
3 years	Low self-esteem/self-assertion Impaired flexibility, self-control compared with similarly aged healthy children Difficulty dealing with frustration Lack of persistence, enthusiasm when performing educational tasks
Preschool (4-6 years)	Overly dependent Lack of enthusiasm in preschool environment
Elementary school (6-12 years)	Attention problems Low self-assertion, self-esteem Withdrawal behaviors, dysphoric affect Social isolation
General	Trouble understanding appropriate affective responses to interpersonal situations Limited social problem-solving skills

Source: adapted from reference 4

notably, such children have trouble understanding appropriate affective responses to interpersonal situations. As a result, they may express distress in unconventional ways.³

Little empirical evidence supports the link between childhood maltreatment and conversion disorder. In one study:⁵

- Adults with conversion disorder (mean age 37.6) reported a higher incidence of physical and sexual abuse, more types of physical abuse, sexual abuse of longer duration, and more-frequent incestuous episodes than did adults with affective disorder.
- Among patients with conversion disorder, having a mother with recurrent illness, nervousness or depression, or who abuses alcohol or sedatives was associated with higher dissociative and somatoform scale scores.
- Physical abuse was associated with increased conversion symptoms.

The authors concluded that childhood trauma is a distinct and predictive—though not necessary—feature of conversion disorder.⁵

Which type(s) of psychotherapy would you use to treat Miss T?

- **supportive therapy**
- **psychodynamic therapy**
- **cognitive-behavioral therapy (CBT)**
- **hypnotherapy**



The authors' observations

Psychotherapy and attention to socio-cultural beliefs may enable the patient to “give up” the conversion symptom.³

Several factors determine choices of psychotherapies, although elements of all approaches are commonly used:

- CBT and behavioral therapy have roles in treating acute symptoms.
- Supportive therapy and hypnotherapy are recommended for treating rare, longstanding conversion symptoms (4 to 6 months duration).
- Psychodynamic therapy can help patients who are introspective, can remember details about their past, and are willing to participate in longer-term therapy.

Cognitive-behavioral therapy. Behavior is shaped by what we learn from the environment. Conversion behavior can be reinforced by others who help maintain the symptoms. Behavioral therapy and CBT are aimed at modifying behaviors via desensitization and by increasing the patient's understanding of his or her physical capacities.

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 **Related resources**

- ▶ Academy of Psychosomatic Medicine. www.apm.org
- ▶ Weiner J, Dulcan M. *Textbook of child and adolescent psychiatry (3rd ed)*. Washington, DC: American Psychiatric Publishing, 2003.

Hypnosis gives patients a medium to recall experiences and feelings they cannot consciously bring up in treatment. Symptom exploration and reduction are broad goals.

Psychodynamic therapy aims to resolve unconscious conflict after a traumatic event. A patient who develops lower-extremity paralysis or sensory problems after having been chastised for running away might benefit from this model, for example.

Supportive psychotherapy emphasizes reassurance and education. For Miss T, that would mean reassurance that her paralysis will improve, with education about conversion disorder and how difficult life events can cause similar symptoms.

Sociocultural considerations. Cultural beliefs inhibit some people's emotions and may predispose them to conversion symptoms.

No empirical evidence indicates that medication improves conversion disorder. Anecdotal reports cite positive response to older antipsychotics, lithium, and electroconvulsive therapy.⁶

Patients with conversion disorder, however, tend to develop mood and/or anxiety symptoms later, and psychotropics may help treat these comorbidities. Follow the patient while symptoms are present.⁷ Comorbid symptoms' severity, response, and presentation dictate follow-up frequency.

Prognosis. Children with conversion disorder generally have good outcomes,⁵ particularly those with good premorbid function who are diagnosed early.⁷ Time from symptom onset to diagnosis ranges from weeks to ≥ 1 year, and most

cases resolve within 3 months of diagnosis. Symptom recurrence is rare but may indicate emerging polysymptomatic somatization disorder.⁵

TREATMENT REASSURANCE AND SUPPORT

Miss T responded well to supportive psychotherapy and reassurance from hospital staff. No psychiatric screening tests were done, but child psychiatrists saw Miss T several times daily, and she exhibited no other psychiatric symptoms. We have no information on follow-up treatment, which occurred outside the hospital.

References

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3. Schwartz A, Calhoun A. Treatment of conversion disorder in an African-American Christian woman: cultural and social considerations. *Am J Psychiatry* 2001;158:1385-91.
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5. Roelofs K, Keijsers GP, Hoogduin KA, et al. Childhood abuse in patients with conversion disorder. *Am J Psychiatry* 2002;159:1908-13.
6. Hales R, Yudofsky S. *Essentials of clinical psychiatry (2nd ed)*. Washington, DC: American Psychiatric Publishing, 2004.
7. Pehlivanurk B, Unal F. Conversion disorder in children and adolescents: a 4-year follow-up study. *J Psychosom Res* 2002;52:187-91.

Consider conversion disorder in patients with no significant medical history who present with acute sensory deficits or motor symptoms that suggest a neurologic or medical condition. Watch for evidence of abuse or neglect, which may predispose children to conversion symptoms. Psychotherapy, even brief, can promote a favorable outcome.

BottomLine