

CASES THAT TEST YOUR SKILLS

A longstanding seizure disorder has left Ms. A disabled, dependent, and depressed. Neurologists say she has epilepsy. Is this diagnosis correct?

For 8 years, she's been 'spellbound'

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HISTORY A TORTURED PAST

Ms. A, age 46, is referred to us by her primary care physician for a psychiatric evaluation. The patient endorses longstanding depression but has never seen a psychiatrist. She also reports that she was raped several years ago.

Ms. A meets DSM-IV-TR criteria for major depressive disorder, recurrent moderate; and posttraumatic stress disorder (PTSD). She complains of depressed mood, lack of energy, poor concentration and memory, anxiety, feelings of hopelessness and worthlessness, insomnia, and poor appetite. She has nightmares, flashbacks of her rape, and decreased interest in activities. She says she tries to avoid thoughts associated with her rape, feels detached from others, is easily startled, and at times is irritable.

Approximately 8 years ago—shortly after she started taking bupropion, 150 mg/d, to help her quit smoking—Ms. A suffered her first seizure-like episode. A neurologist diagnosed her with epilepsy based on EEG findings. He started her on carbamazepine, 200 mg bid,

and titrated the dosage to 900 mg/d. After 2 years, however, her spells continued. Usually, she would black out for a few minutes and forget what she was doing. During some spells she would jerk her hands and feet, stare into space, repeat words over and over, and/or fumble with her hands.

After changing health insurance plans, Ms. A saw another neurologist who switched her to divalproex, 250 mg bid. She began having nausea, vomiting, and alopecia, so she stopped taking divalproex after 2 weeks. The neurologist switched her to topiramate, 25 mg bid, and titrated the dosage to 400 mg/d over 8 weeks with no side effects but minimal response. Reducing topiramate to 200 mg/d and adding phenytoin, 300 mg/d, produced little improvement.

Ms. A says these spells now come once or twice daily. She denies aura, loss of consciousness, tongue biting, or incontinence during seizures.

Medical history. Ms. A has undergone posterior fossa decompression for Arnold-Chiari type I malformation, right nephrectomy for renal cell



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carcinoma, a complete hysterectomy, an appendectomy, and bilateral breast implants. She has also had venous angiomas with head and neck pain.

Ms. A is frustrated over her lack of independence, her limited social life, and her inability to drive because of her seizure disorder. Once employed full-time for 12 years in a doctor's office, she now gets by on disability benefits, which she finds degrading. She feels hopeless and helpless, as antiepileptics have not worked.

Which symptoms would you address now?

- a) depressive symptoms
- b) recurrent seizure disorder
- c) PTSD symptoms

The authors' observations

Ms. A complained of depression, sleep problems secondary to depression and PTSD, poor appetite, underlying anxiety, and decreased concentration, energy, and interest. We decided to address these symptoms with mirtazapine. Because she is thin (126 lb, body mass index 19.2 kg/m²), potential for weight gain with mirtazapine was not a concern.

We gauged Ms. A's response to mirtazapine and her seizure history at our next visit, during which we customarily continue taking the patient's history.

TREATMENT MARRIAGE BY FORCE?

Ms. A begins taking mirtazapine, 15 mg/d. At her next appointment the following week, she says she has stopped it because it has increased her

appetite, which she fears will cause weight gain. She says her seizures, which usually occur at home, have continued with the same frequency.

Upon exploring her history further, we discover that Ms. A's father was rarely around, and when he was he physically abused her. As a child she struggled with dyslexia, for which she received special education. She became pregnant while finishing high school and feels her mother forced her to marry her first husband.

Ms. A added that her three former husbands were physically and/or emotionally abusive toward her. About 10 years ago, she says, her third husband raped her.

We begin to suspect that Ms. A might not have epilepsy because of the seizures' distinct nature, her vague symptoms, minimal or no response to antiepileptics, and comorbid mood and anxiety disorders. We refer her to another neurologist for video EEG (VEEG). She reluctantly agrees to the test, unwilling to believe that her seizures might have a psychiatric cause.

Ms. A suffers from:

- a) epileptic seizures
- b) psychogenic nonepileptic seizures
- c) both types of seizure

The authors' observations

Recurrent seizures characteristic of epilepsy can significantly impair quality of life. Although the diagnosis often is straightforward, distinguishing epilepsy from psychogenic nonepileptic seizures (PNES) can be difficult.

PNES are sudden, episodic changes in behavior, perception, thinking, or feeling. These changes resemble epileptic events but are not prompted by abnormal brain electrical discharges as measured by EEG.¹

Formerly called pseudoseizures, PNES can have a physiologic or psychological cause

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Table 1

Physiologic and psychological causes of nonepileptic seizures

Physiologic

| |
|------------------------------|
| Autonomic disorders |
| Cerebrovascular disease |
| Cardiac disorders |
| Vasovagal syncope |
| Ischemic heart disease |
| Valvular heart disease |
| Arrhythmias |
| Drug toxicity |
| Endocrine disturbance |
| Metabolic disorders |
| Migraines |
| Paroxysmal movement disorder |
| Sleep disorder |

Psychological

| |
|--|
| Anxiety disorders |
| Conversion disorder |
| Dissociative disorder |
| Factitious disorder |
| Malingering |
| Victim of physical, emotional, or sexual abuse |
| Posttraumatic stress disorder |
| Psychotic disorder |
| Somatoform disorder |
| Substance abuse/dependence |

(Table 1). They often are a somatic response to unbearable past events and/or current psychological tension or conflict. Most patients with PNES cite domestic abuse or family conflicts as key stressors.²

Few systematic studies have addressed how life events contribute to PNES. Associated life events

—described mostly in case reports—fall into three general categories:

- childhood and adult trauma
- bereavement or loss
- acute or situational stressors.³

PNES diagnosis has become progressively refined over the last three decades. VEEG is used to diagnose PNES. Neuropsychological evaluation and VEEG are used together if PNES is believed to coexist with epilepsy or psychiatric disorders.^{4,5}

CONTINUED TREATMENT WASTED YEARS

Two weeks after our referral, Ms. A reports that the neurologist discontinued topiramate and phenytoin after VEEG showed no epileptic activity.

Ms. A now realizes she does not have epilepsy. She is angry that her first neurologist had misdiagnosed her, effectively sentencing her to 8 years of needless dependency and disability.

We prescribe escitalopram, starting at 10 mg/d and titrating to 20 mg/d, to address Ms. A's depressive/PTSD symptoms. We also refer her to a psychotherapist, who schedules twice-weekly supportive psychotherapy sessions. The therapist plans to teach her coping techniques and provide ego support and encouragement.

Ms. A's psychotherapy progresses slowly at first, but by the fourth session she sets goals, which include getting off disability as soon as possible. With careful ego strengthening, she resumes driving and searches for a job. During one session, she tells her therapist she has long wanted to become a nurse, so she is encouraged to see a nursing school counselor for advice on selecting prerequisite nursing classes.

The authors' observations

As with Ms. A, an erroneous epilepsy diagnosis can cause physical, psychosocial, and socioeconomic grief for the patient and can lead to needless restrictions, unemployment or underemployment, and dependence on disability benefits. After the misdi-

agnosis, Ms. A lost control of her future and considered her life a burden, leading to depression and anxiety. Her seizures caused most of her physical and psychological disturbances and diminished her overall function.

PNES are often mistaken for epileptic seizures, and 26% of seizure patients experience both.⁶ In a study of 50 patients, between 5% and 20% of patients evaluated for epilepsy and 10% to 40% of patients referred to comprehensive epilepsy centers were later found to have PNES.⁷

Like Ms. A, many patients with undiagnosed PNES receive antiepileptics to treat apparent epilepsy. These medications can cause troublesome side effects—from GI problems, to respiratory arrest in patients with pseudostatus, to potential teratogenicity.

In addition, comorbid epilepsy often goes undetected in patients with PNES. This could lead to inadequate treatment, increasing the patient’s morbidity and mortality risk.⁸

Which clinical features may suggest a psychogenic cause for seizures?

- a) frequent emergency room visits
- b) lack of response to antiepileptics
- c) attacks occur only in certain situations
- d) all of the above

The authors’ observations

Patient history. Take a thorough history for patients with a history of seizures.

Too often, doctors assume a previous epilepsy diagnosis is correct, especially if rendered by a neurologist. In the United Kingdom, 20% to 31% of epilepsy diagnoses are incorrect because of incomplete history and misinterpreted EEG findings.⁸ When taking a patient’s seizure history, clinicians often do not get:

- a detailed history of seizures or seizure-like events, including onset, frequency,

Table 2

Patient features that suggest nonepileptic seizures

| |
|---|
| Comorbid psychiatric disorder(s) |
| Events occur only in presence of others or only when alone |
| Lack of concern or excessive emotional response to seizures |
| Minimal or no response to antiepileptics |
| Multiple daily seizures |
| No history of injury resulting from seizures |
| Normal neurologic history and examination |
| Repeated hospitalizations or emergency room visits |
| Unremarkable EEG and MRI findings |
| Victim of sexual abuse |

observations from family or friends, and seizure duration

- information on whether the patient remembers seizure details; has had pre-spell aura or loss of consciousness, or cries during the spells
- history of physical and/or sexual abuse.

Multiple daily seizures, repeated hospitalizations or emergency room visits, minimal response to antiepileptics, and no history of injury after seizures could suggest nonepileptic seizures. Seizures may be psychogenic if the patient was sexually abused, has a comorbid psychiatric disorder, or suffers attacks only when alone or only in public (*Table 2*).

Refer patients with features that may suggest PNES to a neurologist for VEEG to confirm or rule out epilepsy, because roughly one-quarter of seizure patients can have both.

Finding psychological causes. Psychological investigations become paramount after physiologic causes for nonepileptic seizures are ruled out.

continued

Related resources

- ▶ Adetunji B, Mathews M, Williams A, Verma S. Psychogenic or epileptic seizures? How to clinch the diagnosis. *Current Psychiatry* 2004;3(11):25-35.
- ▶ Privitera MD. EEGs and epilepsy: When seizures mimic psychiatric illness. *Current Psychiatry* 2002;1(9):14-21.

DRUG BRAND NAMES

Bupropion • Wellbutrin, Zyban
 Carbamazepine • Tegretol
 Divalproex sodium • Depakote
 Escitalopram • Lexapro
 Mirtazapine • Remeron
 Phenytoin • Dilantin
 Topiramate • Topamax

DISCLOSURE

Dr. Khan is a speaker for Pfizer and Wyeth.
 Drs. Aziz and Syed report no financial relationship with any company whose products are mentioned in this article, or with manufacturers of competing products.

The Minnesota Multiphasic Personality Inventory (MMPI) is often used to discriminate PNES from epilepsy. Wilkus et al⁹ reported significant differences in scores of MMPI hypochondriasis, hysteria, and schizophrenia scales among patients with PNES and epilepsy. Patients with PNES may have higher MMPI hypochondriasis, hysteria, schizophrenia, and psychopathic deviate scores than do patients with epilepsy.

Other authors, however, have found more-variable MMPI results when using the test to distinguish PNES from epilepsy. Thus, the MMPI may provide supportive data for PNES diagnosis but is not a definitive tool.

Misdiagnosis of psychogenic seizures as epilepsy can subject the patient to years of inappropriate treatment and needless limitations. Do not assume that a previous epilepsy diagnosis is correct. Take a thorough history and check for psychological stressors. Perform psychological tests if confirmatory video EEG shows no epileptic activity.

BottomLine

Explaining the findings. Getting the patient to accept that the epilepsy is “in your head” is crucial to engaging him or her in treatment. The clinician needs to be honest with the patient while projecting a positive approach to the diagnosis. Tell the patient that not having epilepsy is “good news,” that antiepileptics are not needed, and that he or she can gain better control once stress or emotional issues are resolved.¹⁰

FOLLOW-UP A LEARNING EXPERIENCE

Within 4 months of her last seizure, Ms. A showed dramatic improvement. She began driving, working part-time and enrolled in nursing school. Her disability benefits program provided tuition assistance.

Ms. A has now been seizure-free for 1 year. Motivated and determined, she is taking up to 8 credit hours per semester and earning As and Bs but at times is anxious and fears failure. She needs much support and encouragement. Multiple therapy techniques—including direct teaching, admiring her progress, offering support, explaining, and ego strengthening—have produced good results. She is still taking escitalopram, 20 mg/d, and sees her therapist every 2 weeks.

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