Treatment of Patients With Psychogenic Nonepileptic Attacks

Psychogenic nonepileptic attacks (PNEA), also known as psychogenic nonepileptic seizures, dissociative seizures, or pseudoseizures (a term now widely considered pejorative), can be terrifying and frustrating for patients and their families. PNEA are transient episodes of involuntary movements or altered consciousness caused by psychological mechanisms, often involving intense stress. They are the most common form of functional neurological disorder, the preferred term for what was previously known as conversion disorder. Unlike factitious disorder or malingering, PNEA are not consciously produced or controlled by the patient, ie, they are not “faked.” Individuals with PNEA may thrash and jerk their limbs, fall to the floor, roll back and forth, or simply close their eyes and become unresponsive as if asleep. PNEA can appear very much like epileptic seizures, in which abnormal electrical discharges in the brain cause similar episodes of involuntary movements and altered consciousness.

The criterion standard for diagnosis of PNEA entails the capture of all typical episodes on video-electroencephalogram (vEEG), demonstrating normal brain activity before, during, and following the event, and semiology (signs and symptoms) consistent with PNEA as determined on video review by an experienced epileptologist.1 Approximately one quarter of patients admitted to epilepsy monitoring units for evaluation of refractory epilepsy are ultimately diagnosed as having PNEA.2

Once the diagnosis of PNEA is made, psychotherapy is the treatment of choice.3 Two small randomized trials (66 and 38 participants) demonstrated that one specific form of psychotherapy—cognitive behavioral therapy—is effective in reducing PNEA frequency and improving quality of life. A large multicenter randomized trial of cognitive behavioral therapy is currently completing data analysis (ISRCTN 05681227).4 Antiseizure medications and surgeries provide no benefit and can cause important adverse effects.

Some patients and clinicians report that the health care system presents numerous obstacles to diagnosing and providing effective evidence-based treatment for PNEA. These barriers to care include intense stigma, a lack of training regarding functional neurological disorders, and a shortage of experienced behavioral health specialists. An additional obstacle is the poor communication among emergency and primary care clinicians, neurologists, and behavioral health specialists. Obstacles to care are commonly encountered during the first presentation of PNEA in which patients seek care and persist throughout the course of workup and treatment, with many patients with PNEA eventually dropping out of medical care.3

In a qualitative study of 135 participants with PNEA, respondents reported that clinicians routinely accused them of faking their symptoms, disparaged them, and even inflicted minor injuries on them in efforts to “prove” that their symptoms were fake.4 Clinicians may state to other health care personnel, family members, and to patients that the patients are looking for attention, drug seeking, trying to obtain a free meal, or consciously pursuing some other primary or secondary gain. Disparaging comments by clinicians have been publicly posted on blogs (“Doctor has pseudoseizure to avoid patient with pseudoseizures”).7

Patients report being pinched, subjected to nail bed pressure, stuck with needles, splashed with water, and forced to inhale noxious chemicals such as ammonia during or around their psychogenic attacks.6,8 Some of the reported noxious stimuli, such as nail bed pressure and supraorbital pressure, are part of the neurological examination recommended to test an apparently impaired level of consciousness. But other acts, such as pricking with needles6 and exposure to noxious chemicals,8 should not be part of the neurological examination and can do lasting physical and especially psychological harm. Some people with PNEA have a history of physical or sexual abuse by people they trusted, which can make intentionally painful acts by health care practitioners especially frightening and upsetting.9 There is no evidence that any of these procedures are more effective than the less invasive intranasal tickle, in which the examiner brushes a cotton swab around the inner rim of the patient’s nares. Patients with psychogenic seizures can remain entirely unresponsive through the most intense noxious stimuli, making noxious stimulation generally a poor test for trying to differentiate PNEA from epileptic seizures.

In addition to being treated with skepticism and disdain, some patients with suspected or possible PNEA do not receive prompt evaluation with vEEG to obtain a definitive diagnosis. The majority of patients with PNEA are initially misdiagnosed with epilepsy and are treated with antiseizure medications for multiple years before vEEG is obtained and the correct diagnosis...
is made. These treatments provide no benefit and carry real risk. There are reported cases of patients with PNEA who, after being misdiagnosed with epilepsy, received medications that were associated with Stevens-Johnson syndrome or fetal malformations during pregnancy, or underwent unnecessary surgical implantation of vagus nerve stimulators.

Training in medical ethics and communications can help to reduce biased and dismissive interactions and foster nonjudgmental communications. Medical education should also emphasize the differences between functional neurological disorders such as PNEA, in which symptoms are not consciously produced and do not respond well to psychotherapy, and factitious disorder and malingering, in which symptoms are consciously produced and do not respond to psychotherapy. Education for neurologists, emergency physicians, and internists regarding the proper diagnosis of PNEA, based on history, signs and symptoms during PNEA episodes, and EEG findings, can help reduce the use of noxious stimuli and expedite referral to vEEG monitoring for patients with suspected PNEA. Closer collaboration and improved communication among emergency physicians and other emergency personnel (such as paramedics), primary care clinicians, and neurologists, as well as appropriate use of home vEEG monitoring, can help expedite the definitive diagnosis of PNEA and prevent adverse effects from unnecessary antiseizure medications.

Once the diagnosis of PNEA is made, most patients struggle to find behavioral health specialists to provide treatment, and particularly specialists with experience in the treatment of functional neurological disorders. It is common for neurologists to discharge these patients from their care, because the patients do not have a neurological disorder such as epilepsy. Patients who attempt to establish care with a behavioral health specialist often do not receive psychotherapy and instead are referred for additional neurological testing, because the specialist may be unfamiliar with PNEA or skeptical of the diagnosis even when confirmed by vEEG. This is especially likely to occur if the patient has a PNEA in the behavioral health specialist’s office, which may occur during the psychologically stressful psychotherapeutic process.

Obstacles to treatment of PNEA could be reduced by educating clinicians about the availability of published evidence-based psychotherapy regimens for PNEA, increasing the number of psychiatrists and psychotherapists, increasing the use of teletherapy, and developing computer-assisted psychotherapy regimens. In addition to improving access to behavioral health care, cooperation and communication among primary care clinicians, neurologists, and behavioral health specialists needs to improve to ensure that all members of the treatment team as well as the patient and family understand the diagnosis and its treatment. Fruitless back and forth referrals can be prevented by clear communications, ideally verbal, from neurologists who make the diagnosis of PNEA to behavioral health specialists who provide treatment, as well as by follow-up with neurologists, and by neurologists remaining available to evaluate new functional neurological symptoms arising during psychotherapy. Coordination of evidence-based, respectful care should be routine for patients with PNEA and other functional neurological disorders, instead of the mistreatment some of these patients have received from the medical community.

**REFERENCES**


