# Nonepileptic seizures

AKA pseudoseizures (some prefer not to use this term since it may connote voluntary feigning of seizures), with the term psychogenic seizures being preferred for nonepileptic seizures (NES) with a psychologic etiology (psychogenic seizures are real events and may not be under voluntary control).

One of the hazards of NES is that patients may end up needlessly taking AEDs, which in some cases may worsen NES.

Most NES are psychogenic.

## Differential diagnosis

psychologic disorders (psychogenic seizure)

a) somatoform disorders: especially conversion disorder

b) anxiety disorders: especially panic attack and posttraumatic stress disorder

c) dissociative disorders

d) psychotic disorders

e) impulse control disorders

f) attention-deficit disorders

g) factitious disorders: including Munchausen’s syndrome

cardiovascular disorders

a) syncope

b) cardiac arrhythmias

c) transient ischemic attacks

d) breath-holding spells

migraine syndromes

a) complicated migraines

b) basilar migraines

movement disorders

a) tremors

b) dyskinesias

c) tics , spasms

d) other (including shivering)

parasomnias & sleep-related disorders

a) night terrors , nightmares , somnambulism

b) narcolepsy, cataplexy

c) rapid eye movement behavior disorder

d) nocturnal paroxysmal dystonia

gastrointestinal disorders

a) episodic nausea or colic

b) cyclic vomiting syndrome

other

a) malingering

b) cognitive disorders with episodic behavioral or speech symptoms

c) medication effects or toxicity

d) daydreams usually encountered in children

# Differentiating NES from epileptic seizures

## General information

Distinguishing between epileptic seizures (ES) and NES is a common clinical dilemma. There are unusual seizures that may fool experts [1)]. Some frontal lobe and temporal lobe complex partial seizures may produce bizarre behaviors that do not correspond to classic ES findings and may not produce discernible abnormalities with scalp-electrode EEG (and therefore may be misdiagnosed even with video-EEG monitoring, although this is more likely with partial seizures than with generalized). A multidisciplinary team approach may be required.

Features common to both true seizures and NES: verbal unresponsiveness, rarity of automatisms and whole-body flaccidity, rarity of urinary incontinence. Reminder: some seizures can be bizarre and can resemble NES (sometimes called pseudo-pseudoseizures). 10% of patients with psychogenic seizures actually have epilepsy.

Features suggestive of non-epileptic seizures:

1. arching of the back: 90% specific for NES

2. asynchronous movement

3. stop & go: seizures usually build and then gradually subside

4. forced eye closing during entire seizure

5. provoked with stimuli that would not cause a seizure (e.g. tuning fork to the head, alcohol pad to the neck, IV saline...)

6. bilateral shaking with preserved awareness. Exception: supplementary motor area seizures (mesial frontal area)—these seizures are usually tonic (not clonic)

7. weeping (whining): highly specific

8. multiple or variable seizure types (ES is usually stereotypical), fluctuating level of consciousness, denial of correlation of Sz with stress

If any two of the following are demonstrated, 96% of time this will be NES:

1. out-of-phase clonic UE movement

2. out-of-phase clonic LE movement

3. no vocalization or vocalization at start of event

Lateral tongue laceration is very specific for seizures.

### History

Attempt to document: prodromal symptoms, precipitating factors, time and environment of Sz, mode and duration of progression, ictal and postictal events, frequency and stereotypy of manifestations. Determine if patient has history of psychiatric conditions, and if they are acquainted with individuals who have ES.

### Psychological testing

May help. Differences occur in ES and NES on the Minnesota Multiphasic Personality Inventory (MMPI) scales in hypochondriasis, depression hysteria, and schizophrenia [2)]

1)
King DW, Gallagher BB, Marvin AJ, et al. Pseudoseizures: Diagnostic Evaluation. Neurology. 1982; 32:18–23
2)
Henrichs TF, Tucker DM, Farha J, et al. MMPI Indices in the Identification of Patients Evidencing Pseudoseizures. Epilepsia. 1988; 29:184–187