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Case Report

# Psychogenic Non-Epileptic Seizures with Comorbid Anxiety Disorder in an Adolescent Male Presenting at Edward Francis Small Teaching Hospital, Banjul, The Gambia: A Case Report

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## Abstract

Psychogenic non-epileptic seizures (PNES) are events that mimic epileptic seizures but lacking epileptiform activity on electroencephalogram (EEG). Distinguishing PNES from epileptic seizures (ES) presents a significant diagnostic dilemma. Clinicians typically rely on various clinical signs to differentiate between the two conditions. PNES is frequently linked with underlying psychological distress or psychiatric disorders.

Clinical findings suggest that specific features, such as prolonged seizure duration, occurrence from apparent sleep with EEG-confirmed wakefulness, fluctuating course, asynchronous movements, pelvic thrusting, side-to-side head or body movements, closed eyes during the episode, ictal crying, memory recall, and absence of postictal confusion, are indicative of PNES rather than ES. Additionally, postictal stertorous breathing has been found to distinguish convulsive PNES from generalized tonic-clonic seizures (GTCS), warranting its inclusion as a critical clinical sign. A comprehensive clinical diagnosis should incorporate all available data, rather than relying on a single sign alone.

This case report presents a 19-year-old male diagnosed with PNES with comorbid anxiety disorder at Edward Francis Small Teaching Hospital (EFSTH) in Banjul, The Gambia, with a focus on his clinical presentation, diagnostic challenges, and management approach.

**Keywords:** PNES; EEG; ES; GTCS; EFSTH

## Introduction

The term "psychogenic non-epileptic seizures" (PNES) was introduced by modern Neurologists following the adoption of video-electroencephalography (vEEG) in epilepsy centers. In 1964, Liske and Forster initially used the term "pseudo-seizures" to describe paroxysmal events resembling epileptic seizures but lacking the electroencephalographic changes typical of epilepsy (1).

Over time, various terms have been used to describe PNES, including "psychogenic seizures," "nonepileptic seizures," "pseudo-seizures," "psychogenic pseudo-seizures," and "psychogenic nonepileptic attacks." However, "psychogenic non-epileptic seizures" is now the most widely accepted term in scientific literature. More recently, some researchers have

suggested using "dissociative seizures" or "functional seizures" to describe the condition (2, 3). Achieving an international consensus on terminology is crucial, as different ways of communicating the PNES diagnosis can influence how patients perceive, accept, or reject their condition. A standardized terminology could improve communication between healthcare professionals and patients, facilitate inter professional collaboration, and strengthen the therapeutic relationship which will ultimately enhance good treatment outcomes (2, 10).

Andreja et al further provides strong evidence that certain clinical features help differentiate PNES from ES. These include prolonged duration, occurrence from apparent sleep with EEG-confirmed wakefulness, a fluctuating course, asynchronous movements, pelvic thrusting, side-to-side head or body movements, closed eyes during episodes, ictal crying, memory recall, and the absence of postictal confusion (2). Additionally, postictal stertorous breathing has been identified as a distinguishing feature of convulsive PNES compared to generalized tonic-clonic seizures (GTCS) and should be considered among the key clinical indicators (2). However, the final diagnosis should be based on a comprehensive assessment of all available data rather than relying on a single sign (1, 2).

PNES presents a significant challenge for clinicians in both diagnosis and treatment. These episodes involve movement, sensation, or behaviors that resemble epileptic seizures but are classified as a conversion disorder or functional neurological disorder, where psychological distress manifests as physical symptoms (3). Several psychological risk factors have been associated with PNES, including a history of physical or sexual abuse, developmental stressors, post-traumatic stress disorder, dissociative disorders, borderline personality traits, and neuroticism (4).

Diagnosing PNES requires both clinical assessment and neurological monitoring. Inpatient vEEG is considered the gold standard for diagnosis, particularly for distinguishing PNES from epileptic seizures (5). However, previous research indicates that PNES and epilepsy can coexist in approximately 53.69% of PNES cases (6). Therefore, clinical features remain essential for differentiation. Ali et al, propose a diagnostic framework for PNES that does not rely solely on EEG findings but also considers the patient's trauma history, psychiatric background, and observed seizure characteristics when available (6).

The management of PNES is complex requiring biopsychosocial approach as anti-epileptic medications do not directly treat the condition but may still be necessary for patients with coexisting epilepsy. Psychological interventions, particularly cognitive behavioral therapy and group therapy, are considered first-line treatments, as they have been shown to reduce seizure-like episodes and improve quality of life (8).

Several studies have explored the challenges of distinguishing PNES from epileptic seizures, and one case report has highlighted the difficulties of diagnosing PNES in a patient with co-morbid mental health problems (8).

Our case report highlights the diagnostic difficulties encountered in an adolescent who presented to the neurological clinic of Edward Francis Small Teaching Hospital in Banjul and had been managed as a case of epilepsy with various anti-epileptic medications without improvement and was finally referred for psychiatric consultation for further evaluation and management.

## Case Presentation

### Patient Information

The patient is a 19-year-old male senior secondary student residing in western region of The Gambia.

### History of Presenting Complaint

He was referred to the psychiatry unit by a pediatric neurologist following an evaluation for new-onset complex partial epilepsy to rule out PNES. He has had recurrent seizures which was not responsive to adequate doses of sodium valproate and levetiracetam anti-epileptic medications. He was accompanied to the psychiatry unit by his mother and senior brother.

He presented with a two-year history of seizure-like episodes characterized by sudden onset of tonic-clonic jerky movements lasting about 15 seconds without loss of consciousness. There was no loss of bladder or sphincter control and no post ictal confusion or sleep. He has had an average frequency of 4-5 episodes daily which had increased to about 8 episodes per daily in the month prior to presentation. The seizures occurred mainly when he was alone and rarely in public except a few episodes while in school. With the several episodes, patient had not sustained any major injury. He also reported that he could predict onsets of seizure episodes as well as being able to control the duration of the episodes. The mother recorded a particular episode of seizure using her phone and this was shown to us during consultation.

Significantly, prior to the onset of the seizure episodes, he has been pre-occupied with going to Europe through the backway from the Gambia through the sea. He reported that some of his close friends had gone to Europe through the seas using the backway. He had told the parents about his plan but they refused to allow him to take this route. He believes that going to Europe would better his future prospects. As time went on, the pre-occupation became much more intense. He was often worried and apprehensive and he had reported having poor sleep some of the nights. He reported having the fears of dying at nights from the seizures, so, he would keep awake most parts of the nights. He reported having palpitation and internal body heat which normally migrate from his head to his body with occasional breathing difficulty. He expressed sadness about his plight especially when he saw his friends who had gone through the backway becoming financially successful. There was no loss of interest in pleasurable activities and he was not suicidal. There was no history of hearing voices of unseen people neither did he see things nobody else could see.

Since illness became serious in the past one year, this has affected his academic work as a senior secondary school students with occasional absence from school. He has had reason to have his school changed as result of stigma when he had episodes of seizures in school. There was no history of alcohol and substance abuse. There was no confrontation with law enforcement agencies.

He is a product of monogamous, consanguineous marriage. He is the second of the four children of the parents. The father lives in Europe while he lives with the mother and other siblings in The Gambia. There was no history of epilepsy or mental illness in the family

He was diagnosed of pertussis at age 6, and had an operation due to testicular swelling about 4 years ago. There was no post -surgical complications. At age 12, he was hit by a car with minor head bruises but there was no loss of consciousness and hospitalization.

**Mental State Examination**

A young man, aesthetically built, alert, cooperative, appropriately dressed, maintained good eye contact with no abnormal motor movements.

His speech was spontaneous, fluent, coherent and rational. His mood was subjectively normal and objectively worried. He has a normal stream of thought with coherent form, but preoccupied with the desire to travel abroad. There were no hallucinatory experiences. His was well oriented to time, place, and person with good attention and concentration. His memory was good. He was average in intelligence. He had good judgement but partial insight. Neuroimaging showed normal EEG during active seizure episodes and absence of focal neurological deficits.

**Diagnosis**

1. Psychogenic Non-Epileptic Seizure with Comorbid Anxiety Disorder Differential Diagnosis: Epilepsy with Comorbid Anxiety Disorder

**Management and Outcome**

**Treatment Plan**

Routine investigations carried out were full blood count, renal function test, liver function test and toxicology studies. The results were unremarkable.

The following treatments were administered:

1) Psychoeducation to the family and patient
2) Cognitive Behavioral Therapy (CBT
3) Reality Oriented Psychotherapy
4) Medications: He was placed on Fluoxetine 20 mg daily x 2/52 Carbamazepine 200mg tds x 2/52 Diazepam 5 mg bid x 1/52

**Follow-Up and Progress**

At 2 weeks follow up, the seizures continued during the day but ceased at night. Patient was compliant with medications. Diazepam was tapered off while patient continued with Fluoxetine and the Carbamazepine.

At one month follow up, seizure had stopped and patient had started going back to school. Carbamazepine was reduced to twice daily and he continued with the dose of fluoxetine. He continued having psychological treatments

At the second month of follow up, patient reported missing his medications use and he had 2 minor episodes of seizure. He had psychological treatment

3rd- 9th month follow up; Patient no longer have seizures and he was no longer anxious. He has started doing well in school. He continued using the drugs as well as having psychotherapy with support from the family.

**Discussion**

This case highlights a young male diagnosed with PNES, likely triggered by psychological distress linked to personal aspirations and perceived social limitations. The absence of EEG abnormalities during seizure episodes, the lack of post-ictal confusion, and partial voluntary control over symptoms suggest a non-epileptic origin. Although PNES can closely resemble epileptic seizures, its exact pathophysiology remains unclear. Research has consistently linked PNES to psychological trauma, particularly a history of sexual abuse, personality disorders, affective disorders, and post-traumatic stress disorder (7).

The estimated prevalence of PNES is approximately 1.5 cases per 100,000 people annually. However, its incidence appears to be increasing, and PNES is identified in 20–30% of patients admitted to specialized epilepsy centers. Many of these patients are initially referred with suspected epilepsy that is unresponsive to treatment and are frequently misdiagnosed with drug-resistant epilepsy (DRE) (2, 8).

Several clinical signs help differentiate PNES from epileptic seizures. Evidence suggests that long seizure duration, episodes occurring from apparent sleep with EEG-confirmed wakefulness, a fluctuating course, asynchronous movements, pelvic thrusting, side-to-side, head or body movements, closed eyes during seizures, ictal crying, memory recall, and the absence of postictal confusion are distinguishing features of PNES. Additionally, postictal stertorous breathing has been identified as a key feature that differentiates convulsive PNES from generalized tonic-clonic seizures (GTCS) and should be considered a useful clinical indicator (8, 10).

Most individuals with PNES present with at least one recognizable psychiatric disorder, with high rates of somatization, conversion, and dissociative disorders frequently reported. Additionally, comorbid conditions such as depression are common. A history of sexual abuse, trauma, and Post traumatic stress disorder (PTSD) has been identified as a potential contributing factor in the development of PNES. Given these associations, a mental health-focused approach is essential in the management of PNES. Psychotherapy remains the primary treatment option for PNES (8, 11).

Effective PNES management requires a multidisciplinary approach that includes psychotherapy and pharmacological treatment for coexisting psychiatric conditions. Our patient was placed on Fluoxetine for long term management of his anxiety and Carbamazepine, an anti-epileptic medication with the plan of gradually tapering it off. Patient and family education is a crucial component, as understanding the causes and management of PNES can improve adherence to treatment plans. Shen et al. propose guidelines for discussing a PNES diagnosis with patients, emphasizing the importance of recognizing the condition and maintaining close psychiatric follow-up (9).

Cognitive Behavioral Therapy (CBT) and Reality Oriented Psychotherapy are particularly effective in reducing seizure frequency by addressing maladaptive thought patterns and improving coping mechanisms. Despite the high prevalence and significant impact of PNES, there are relatively few clinical trials evaluating treatment options. However, studies on CBT for PNES have shown that it can significantly reduce seizure frequency while also improving psychiatric symptoms, psychosocial functioning, and overall quality of life (10).

**Conclusion**

This case report illustrates the challenges of diagnosing and managing a patient with both Psychogenic Non-Epileptic Seizures and Anxiety Disorders. This case underscores the importance of psychological evaluation in seizure disorders and the effectiveness of a holistic treatment approach, combining psychotherapy and pharmacotherapy. Addressing psychosocial stressors remains a key component in the long-term management of PNES. Further research into the relationship between these two conditions will be imperative in developing better diagnostic and interventional strategies.

**Ethical consideration**

Ethical principles in medical research as declared by Helsinki in 2013 were followed. Confidentiality was ensured as the name of the patient and other specific identifiers were not included. The patient and mother signed the consent form when the case report was explained to them before we embarked on writing up the case report.

**Conflict of Interest:** None

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