

## Case report

# When seizures speak: A case of epilepsy presenting with complex multimodal hallucinations

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### Abstract

Epilepsy is known to induce psychiatric manifestations like mood disturbances, anxiety, and psychosis. Seizures originating in specific brain areas, particularly the temporal lobes, can lead to psychiatric symptoms without associated motor activity characteristic of epilepsy. We report a patient

with intractable epilepsy presenting with complex auditory, visual, and olfactory hallucinations.

**Keywords:** psychosis, epilepsy, seizure activity, hallucinations

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## Introduction

Psychiatric manifestations of epilepsy represent a complex interplay between neurological and psychological factors often presenting challenges in both diagnosis and management. Patients with epilepsy may experience a spectrum of psychiatric symptoms, including mood disorders, anxiety, and psychosis (1). The prevalence of psychiatric symptoms in those with epilepsy can be as high as 80%, especially in those with temporal lobe epilepsy (2). The relationship between epilepsy and these psychiatric manifestations is bidirectional, with seizures influencing mood and behavior, and psychiatric conditions potentially exacerbating seizure activity (2,3). The exact mechanisms underlying these interactions are not fully understood but may involve shared neurobiological pathways as well as psychosocial and iatrogenic factors (1,3).

When a patient presents with prominent commanding auditory hallucinations accompanied by multiple self-harm attempts and functional decline, our knee-jerk response is to diagnose a primary psychiatric illness. However, we present the case of a 32-year-old female whose psychotic experiences were the primary manifestations of complex partial epilepsy, challenging the conventional diagnostic approach associated with such symptoms.

## Case report

Mrs. SS, a 32-year-old mother of 2 with a seven-year history of adult-onset epilepsy, presented with hearing a male voice commanding her, seeing images of dwarfs ridiculing her, and experiencing pleasant smells for a period of 1 year with generalized resting tremors over the last three months in the background of frequent unprovoked seizures.

She heard a male voice instructing her to jump from her fifth-floor apartment and hit her children. Although she actively resisted these commands, her distress led to three attempts to jump out of a window and one attempt to set her clothes on fire. Figures of dwarfs appeared, laughed at her, and vanished making her feel humiliated and distressed. She also encountered pleasant smells with no discernible source. These experiences were episodic in nature and varying in duration from minutes to hours, with some days in between without such sensations.

For three months, she experienced continuous tremors affecting her arms, legs, and face, persisting both at rest and during movement but ceasing during sleep. Repetitive teeth clenching led to painful ulceration inside her mouth.

Over the past year, she mostly stayed in her room due to her fear of causing harm to herself or others. While she engaged in basic tasks of her daily living, she depended on her mother to do household chores and attend to her children's needs. The development of tremors further restricted her daily activities.

She was distressed by her symptoms and felt helpless and guilty for not being able to care for her children. The recent loss of a close cousin, and a newly emerged financial challenge further intensified her distress. However, she felt relieved when she did not perceive above sensations and enjoyed spending her free time on social media and helping her kids with their homework. She had been in contact with psychiatry services since her first attempt of self-harm approximately 1 year ago with previous 2 hospital admissions where she underwent extensive evaluation including magnetic resonance imaging (MRI) of the brain which was normal. She was on an antidepressant and antipsychotic, but she had erratic compliance with the psychotropic medications, primarily due to sedation.

She was receiving follow-up care at the neurology clinic of the National Hospital of Sri Lanka, Colombo (NHSL) for simple partial seizures with secondary generalization. Despite her adherence to anticonvulsant treatment consisting of levetiracetam, lamotrigine, and clobazam, she continued to develop seizures that initiated from the left side of her body with subsequent generalization and loss of consciousness. Her last seizure occurred on the second day following admission.

On the mental state examination, she displayed an anxious affect. Despite feeling distressed and fearful, she did not harbour depressive cognitions or suicidal intentions. She had intermittent experiences of auditory, visual, and olfactory hallucinations. Her cognitive functions were intact and had good insight into her symptoms. She was conscious and alert throughout the interview.

Neurological examination revealed an unsteady gait. Generalized tremors were noted at rest that increased in intensity during movements and heightened anxiety. Bilateral tendon reflexes were exaggerated in both upper and lower limbs. The rest of the physical examination was normal.

She received inpatient care at ward 59, NHSL in liaison with her treating neurology team. Haematological and biochemical investigations including a thyroid profile failed to identify a correctible aetiology for her presentation. Electroencephalogram (EEG) showed generalized spike and poly-spike discharges compatible with ongoing seizure activity.

She was referred to the neurology team for optimization of anticonvulsants. Lamotrigine was increased to 100 mg

bi-daily, levetiracetam and clobazam doses remained at 750mg bi-daily and 10mg daily respectively. As she was distressed by the hallucinatory experiences she was commenced on olanzapine 5mg nocte; later increased to 10mg nocte and benzhexol 2mg mane. Psychosocial interventions were carried out to reduce personal distress, and distress to the family and improve functioning. This included psychoeducation, psychological support, and a functional assessment followed by occupational therapy.

There was a decrease in the seizure frequency and the patient reported a reduction in the intensity and duration of psychotic experiences. Three days following medical optimization there was complete resolution of hallucinations. This was associated with a marked improvement in her anxiety and distress as well as a decline in the severity of the tremors.

Her mental state examination was normal at her follow-up clinic visit two weeks after discharge. Her family reported better engagement with household chores and interpersonal functioning during this period.

## Discussion

The case of Mrs. SS is an example of the coexistence of psychiatric and neurological symptoms within the context of adult-onset epilepsy. Despite adherence to anticonvulsant treatment, she developed intermittent seizures and over the course of a year, she experienced auditory, visual, and olfactory hallucinations that led to severe personal distress and functional limitation.

The episodic and fluctuating nature of the experiences and abnormalities in the central nervous system examination prompted us to consider the possibility of ongoing seizure activity. The EEG confirmed this clinical suspicion. A combined approach consisting of optimization of anticonvulsants and antipsychotics resulted in the resolution of the psychotic symptoms. Whilst accepting that antipsychotics do lower seizure threshold, in order to relieve distress from psychotic experiences this case reiterates the specific use of antipsychotics for a defined period of time.

An exact neurological cause for the tremors couldn't be identified, but they were likely iatrogenic effects induced by lamotrigine and antipsychotics. However, the decrease in tremor intensity with the alleviation of her anxiety suggested that anxiety may also have contributed to the tremors.

This case underscores the importance of considering non-motor seizure activity in patients exhibiting episodic psychotic symptoms, especially when a history of epilepsy is present. Effective management of psychosis in epilepsy requires a multidisciplinary approach, considering both anticonvulsant medications and

psychotropic drugs (4). Addressing the psychosocial impact of epilepsy is also crucial, as the emotional burden associated with the condition can contribute to the development or exacerbation of psychiatric symptoms (1).

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## Statement of contribution

H. M. T. S. Abayawickrama and S. S. Ratnatunga were responsible for the clinical care of the patient. H. M. T. S. Abayawickrama and D. N. Kodikara Arachchi conducted the literature review. H. M. T. S. Abayawickrama and S. S. Ratnatunga collaborated on writing the initial draft. All authors actively participated in reviewing and approving the final draft of the manuscript.

## Declaration of interest

There are no conflicts of interest.

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