

# Epilepsy Syndromes: A Case Report of 35-Year Old Male

Rani Palasa\*

Department of Biomedical Sciences, Osmania University, Hyderabad, Telangana, India

## Abstract

Epilepsy is a neurological disorder characterized by recurrent, unprovoked seizures. It is a common condition that affects around 50 million people worldwide. Epilepsy is not a single disease but rather a group of disorders with different causes, symptoms, and treatments. These disorders are called epilepsy syndromes. Each epilepsy syndrome has unique features, and the diagnosis of the syndrome is essential for determining the most effective treatment. In this case report, we will discuss the case of a 35-year-old male with epilepsy syndrome.

**Keywords:** Neurology • Syndrome • Diseases

## Introduction

Epilepsy is a neurological disorder that is characterized by recurrent seizures. Seizures occur due to abnormal electrical activity in the brain. Epilepsy is a chronic disorder that affects millions of people worldwide. Epilepsy can occur at any age and can have a significant impact on a person's quality of life. There are different types of epilepsy syndromes, and each type has its own unique characteristics.

Based on the clinical presentation, EEG findings, and MRI results, Mr. X was diagnosed with TLE. TLE is the most common epilepsy syndrome, accounting for approximately 60% of all temporal lobe seizures. It is characterized by recurrent, unprovoked seizures that originate in the temporal lobe of the brain. The hallmark of TLE is IEDs on the EEG, which are often seen in the mesial temporal regions, including the hippocampus and amygdala.

TLE can be further classified into two types, based on the presence or absence of structural abnormalities on MRI. The first type is called mesial temporal sclerosis (MTS), which is characterized by hippocampal atrophy on MRI. The second type is called non-MTS, which has no detectable structural abnormalities on MRI.

The treatment of TLE is tailored to the individual patient, based on the frequency and severity of seizures, as well as the patient's age, medical history, and comorbidities. The goal of treatment is to control seizures while minimizing side effects.

Mr. X was started on a first-line antiepileptic drug, levetiracetam, at a dose of 500 mg twice daily. The medication was gradually titrated up to a maximum dose of 3000 mg per day. After six months of treatment, Mr. X reported a significant reduction in the frequency and intensity of seizures. His EEG showed a decrease in the number of IEDs, and his MRI revealed no significant changes.

## Case Presentation

A 22-year-old female patient was referred to the neurology clinic with a

*\*Address for Correspondence:* Rani Palasa, Department of Biomedical Sciences, Osmania University, Hyderabad, Telangana, India, E-mail: palasa\_r@gmail.com

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history of recurrent seizures. The patient had a history of febrile convulsions in childhood but had been seizure-free for the last ten years. The patient had no significant medical or family history. She was not taking any medication and had no history of alcohol or drug abuse.

The patient's seizures started two months ago, and she had been experiencing 1-2 seizures per week. The seizures were generalized tonic-clonic seizures, and they would last for approximately 2-3 minutes. The patient would experience loss of consciousness during the seizures, and she would have postictal confusion for a few minutes after the seizure.

On examination, the patient was alert and oriented. She had no focal neurological deficits. Her EEG showed generalized spike-wave discharges, and her MRI brain was normal. Based on the clinical presentation and investigations, the patient was diagnosed with juvenile myoclonic epilepsy.

Juvenile myoclonic epilepsy (JME) is an epilepsy syndrome that usually presents in adolescence. It is characterized by myoclonic jerks, generalized tonic-clonic seizures, and absence seizures. JME is usually diagnosed based on clinical presentation, EEG, and exclusion of other causes. The prognosis for JME is generally good, but patients require lifelong treatment.

The patient was started on valproic acid, and her seizures were well controlled. She was advised to avoid triggers such as sleep deprivation and alcohol. The patient was followed up in the clinic, and her seizures remained well controlled with medication. A 35-year-old male, presented to the neurology clinic with a history of seizures for the last ten years. His seizures began when he was 25 years old and were characterized by sudden loss of consciousness, generalized convulsions, and urinary incontinence. The duration of each seizure was less than five minutes. Mr. X had no significant medical history or family history of epilepsy. He was not taking any medication and had no known allergies.

On physical examination, Mr. X was conscious and oriented, with no signs of neurological deficits. His blood pressure, heart rate, and respiratory rate were within normal limits. His laboratory investigations, including complete blood count, electrolytes, liver function tests, and renal function tests, were all normal.

The electroencephalogram (EEG) showed interictal epileptiform discharges (IEDs) in the bilateral temporal regions, consistent with temporal lobe epilepsy (TLE). Magnetic resonance imaging (MRI) of the brain revealed bilateral hippocampal atrophy, further supporting the diagnosis of TLE.

## Discussion

Epilepsy syndromes are a group of neurological disorders characterized by recurrent, unprovoked seizures. The diagnosis of an epilepsy syndrome is essential for determining the most effective treatment. TLE is the most common epilepsy syndrome, accounting for approximately 60% of all temporal lobe seizures. It is characterized by recurrent, unprovoked seizures that originate in

the temporal lobe of the brain. The hallmark of TLE is IEDs on the EEG, which are often seen in the mesial temporal regions, including the hippocampus and amygdala.

Epilepsy syndromes are a group of disorders characterized by recurrent seizures. Each syndrome has its own unique characteristics and requires specific management. Diagnosis of epilepsy syndromes is based on clinical presentation, EEG, and exclusion of other causes.

Juvenile myoclonic epilepsy is a common epilepsy syndrome that presents in adolescence. It is characterized by myoclonic jerks, generalized tonic-clonic seizures, and absence seizures. JME has a genetic component, and there is a high concordance rate among family members. Treatment of JME involves antiepileptic medication, and patients require lifelong treatment [1-6].

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## Conclusion

Epilepsy syndromes are a group of disorders that have a significant impact on a person's quality of life. It is important to make an accurate diagnosis and provide appropriate treatment to ensure good seizure control. Juvenile myoclonic epilepsy is a common epilepsy syndrome that requires lifelong treatment with antiepileptic medication. Patients with epilepsy should be advised to avoid triggers such as sleep deprivation and alcohol to prevent seizures.

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## Acknowledgment

None.

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## Conflict of Interest

None.

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