

## Case study

### Case report on Seizures Disorder

#### ABSTRACT

**Introduction:** - Seizures are periods of aberrant motor, sensory, autonomic, or mental activity caused by discharge from brain neurons(1). Epilepsy is defined as the two or more unprovoked seizures that occur more than 24 hours apart(2). There are three types of seizures: focal, generalized, and unknown. Generalized seizures arise in bilaterally dispersed networks and rapidly activate them(3). The origin of focal seizures is assumed to be in one hemisphere of the brain. Epileptic spasms are an example of the unknown kind(4) **Main symptoms:** - The signs and symptoms of a seizure can range from minor to severe; these are as follows; perplexity, stare, Jerking motions of the arms and legs, Loss of awareness, Fear, anxiety, and other cognitive symptoms. **Diagnosis:** - The initial step for a physician is to rule out alternative possibilities, such as nonepileptic seizures. These might seem like seizures, but they're usually caused by other things like low blood sugar or high blood pressure, changes in heart rhythm, or mental stress. **Therapeutic Intervention:** - Tab. Levetiracetam 500mg \* OD, Tab. Carbamazepine 200mg \* TDS, Tab. Escitalopram 10mg \* OD, Tab. Neurobion forte 1mg \* OD. **Outcome:** - After treatment the patient show improvement. His temporary confusion got reduced, he is now aware to many things. **Conclusion:** - My patient was Admitted to AVBRH with a known case of Seizures Disorder and he had a complaint of temporary confusion and he was not aware to his surroundings. After getting appropriate treatment his condition was improved.

**Keywords:** - Seizure, classification, nursing management.

#### Introduction

A seizure is a sudden and uncontrolled electrical breakdown in the brain. It can affect your level of consciousness as well as your behaviour, motions, and sensations(5). Two or more seizures that occur at least 24 hours apart and are not triggered by a recognised cause are considered epilepsy(6).

Seizures can take many different forms, each with their own set of symptoms and severity. The type of seizure is determined by where it begins and how far it extends in the brain(7). Seizures usually last between 30 seconds and two minutes. A medical emergency is defined as a seizure that lasts more than five minutes(8).

You might be surprised to learn that seizures are more prevalent than you believe. A stroke, a closed head injury, a meningitis infection, or another illness can cause seizures. The cause of a seizure, on the other hand, is usually unknown(9).

Although medicine may control most seizure disorders, seizure treatment can still have a substantial influence on your everyday life. The good news is that you and your doctor can work together to find a balance between seizure management and drug side effects(10).

#### Case Presentation

##### *Focal seizures:* -

The aberrant electrical activity in one part of your brain causes focal seizures. With or without loss of consciousness, focal seizures can occur(11).

### ***Generalized seizures: -***

Generalized seizures are seizures that appear to affect all parts of the brain. The following are examples of generalized seizures:

- Absence seizures.
- Seizures that are tonic.
- Seizures that are myoclonic.
- Seizures that are tonic-clonic(12).

**Patient Identification:** - A male patient of 20 years old from Yavatamal was admitted to male medicine ward, AVBRH on 17<sup>th</sup> February 2021 with a known case of Seizures Disorder. His weight is 42 kg and height are 172 cm.

**Present Medical History:** - A male patient of 20 years from Yavatamal was admitted to male medicine ward, AVBRH on 17<sup>th</sup> February 2021 brought by his parents with a chief complaint of Seizures dizziness since 2 days, weakness and mild fever since morning.

**Past Medical History:** - A male patient of 20 years from Yavatamal was admitted to male medicine ward, AVBRH on 17<sup>th</sup> February 2021 has a past medical history of Seizures Disorder since 9 years. He has been taking treatment from SRMSS hospital, Yavatmal.

**Family History:** - There are 3 members in the family. My patient was diagnosed to have Seizure's disorder and there was none in the family with Seizure's disorder, only the patient was diagnosed except him all the members are healthy.

**Patient Intervention and outcomes:** - My patient was diagnosed with Seizure's disorder when he was 11 years old from that time, he was admitted to hospital on time to time for treatment of the diseases...

**Clinical Findings:** - **Temporary** confusion, Loss of consciousness or awareness.

**Etiology:** - The brain's nerve cells (neurons) make, send, and receive electrical impulses, which allow the nerve cells in the brain to interact. A seizure can be caused by anything that disturbs these communication routes. Genetic mutations may be the cause of several seizure disorders.

**Physical Examination:** - There is not much abnormality found in head-to-toe examination, the child lean and thin and having dull look. He is weak and cooperative.

### **Diagnostic Assessment: -**

- Hb- 14.8%
- RBC- 4.65 million.
- WBC- 3900 cumm.
- Serum Creatinine- 0.6 mg/dl.
- Sodium- 139 mEq/L.
- Albumin- 4.1 g/dl.

- Potassium- 4.2 mmol/L.

**Therapeutic Intervention:** -Tab. Levetiracetam 500mg \* OD, Tab. Carbamazepine 200mg \* TDS, Tab. Escitalopram 10mg \* OD, Tab. Neurobion forte 1mg \* OD.

**Discussion:** - The condition of seizures is regarded as a medical emergency. Prolonged seizures, if left untreated (or undertreated), can result in lifelong brain damage or death(13). Treatment must be started right away. If the first-line treatments fail, an iatrogenic coma may be required(14). In any event, the individual in status epilepticus must be constantly monitored, and continuous EEG is frequently required to ensure that the seizures have ceased not only clinically but also electrically(15). In the United States, 150,000 people are projected to have seizures each year(16). According to the CDC's MMWR report, the total prevalence of epilepsy in the general population is 4.6/1000, while it is 4.1/1000 among those under the age of 15(17). Seizures are more common at the extremes of age, i.e., among youngsters and elderly individuals. Status Epilepticus affects about 15% of persons with epilepsy. Epilepsy affects around two to three million Americans, although the majority of them are seizure-free thanks to modern treatments(18). During a seizure, it's critical to keep the seizure sufferer safe from self-injury. Clearing the area of any hard or pointy objects, releasing tight clothes, and placing a flat, soft item under the head are all good precautions to take. If possible, turn the patient on his or her side and lay something soft and flat between the teeth (such as a pad or pocketbook). Restraint is not recommended. Artificial respiration should only be performed if breathing does not resume after the seizure has ended. If the patient appears disoriented after the seizure, he or she should be permitted to sleep or be assisted home. The patient's head and shoulders should be lifted if he or she wishes to sleep(19).

### **Nursing Management:**

**During a seizure:** The nurse's primary task is to notice and document the sequence of indications. The sort of therapy necessary is typically determined by the form of the seizure. The patient is examined before and during a seizure, and the following items are recorded:

- Events leading up to the seizure
- Aura manifestations
- Types of movement in the affected body part
- The size of both pupils, as well as whether or not the eyes are open
- Inability to communicate after a seizure(20)

**After a seizure:** The nurse's responsibility once a patient has a seizure is to chronicle the events leading up to, during, and after the seizure, as well as to prevent complications. Hypoxia, vomiting, and pulmonary aspiration are all possibilities for the patient. To avoid complications, the patient is positioned in a side-lying posture to enable oral secretion drainage, and suctioning is used if necessary to keep the patient's airway open and prevent aspiration. Precautions against seizures are in place. Suction equipment, such as a suction catheter and an oral airway, should be readily available. To prevent damage to the patient, the bed is lowered with two to three side rails raised and cushioned if necessary. After the seizure, the patient may feel sleepy and want to sleep. They may not recall events leading up to the seizure or for a short time thereafter(21).

**Conclusion:** Seizures are neurological disorders in which firing from brain neurons causes periods of abnormal motor, sensory, autonomic, or mental activity. If not treated promptly, it can lead to consequences. When they have been identified with the correct disease condition, it is critical to start preventive actions. After properly diagnosing my patient, he received appropriate treatment, and he showed significant improvement, with treatment continuing until my last day of care.

**Ethical Clearance:** - Taken from institutional ethics committee.

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