Case Report

Clinical Diagnosis and Treatment of Absence Seizures: case study

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Received Date: April 18, 2021
Publication Date: May 01, 2021

Abstract

Clinically shown to affect motor and cognitive disturbances of the nerve cells of the brain, absence seizures are often associated with impaired or loss of consciousness. Seizures are caused by a variety of etiopathophysiological events that result in neurobiological changes in the central nervous system's reticulothalamocortical circuitry zones.

This allows for absence seizure episodes to occur. A 24-year-old adult patient with diminished consciousness presented to the hospital with an absence seizure. The patient's brain magnetic resonance imaging scan revealed a small focal flair hypertensive area near the cavernous sinus in the right para sellar region, as well as moderate flair hypersensitivity in the left cavernous sinuses, right maxillary, and ethmoid sinusitis. Regular waves with electrode objects were seen on the electroencephalogram of the brain. The patient was diagnosed with absence seizures and was given epical 500 mg twice daily to treat them. The patient was able to recover from his seizure and was given treatment before being released. Once every eight weeks, he was summoned for a checkup.

Keywords: *absence seizures, hypersensitivity, epical, consciousness, etiopathophysiological.*

Background

A seizure is a brief period of irregular electrical activity in the brain accompanied by strong electrical signals. 1st Absence seizures, which can last anywhere from a few seconds to minutes and cause loss of consciousness but no noticeable convulsions, are most common in children under the age of ten. Unresponsiveness, cyclic blinking of eyelids, abruptly stopped speech and movement, mouth chewing, lip-smacking, and rubbing fingers are all symptoms of absence seizures. Total blood count tests, brain computerized tomography scans, magnetic resonance imaging (MRI), electroencephalograms, and cerebrospinal fluid examinations are used to make the diagnosis, which provides evidence and clearly shows the source of seizure lesions in the brain. Phenytoin and carbamazepine, along with a ketogenic diet, can be used to avoid and treat absence seizures.

Case Report

Mr. EA, a 24-year-old male patient with an absence seizure episode, was brought to primary care with a 2–4-minute unconsciousness, anxiousness, and poor attention. The patient said that he regained consciousness after a few minutes, but that the anxiousness remained. Sometimes vomiting, irregular movements, headache, fever, urinary incontinence, or palpitations were present in the patient.

Family History

In his family history, there was no suffered person from generalized tonic–clonic seizures and developed intense but one of his cousins from father side has to face this type of problem and he takes vitamin and iron supplements in his diet.

Past Medical History

Mr. EA is a single man who has never had a head injury, neurological disorder, or drug addiction. He had an absence seizure, which was marked by loss of consciousness and diminished memory, sometime in the previous two years. After being retrieved from the episode, he said he was unresponsive and unable to remember his events, as well as experiencing baseline memory disturbances. The patient's previous medical history revealed no chronic situation such as diabetes or cardiovascular issues. But he has to face a stomach problem.

General Examine Reports

The patient was aware, oriented, and afebrile, with a heart rate of 80 beats per minute and regular respiration. His blood pressure was a little bit low 110/80, and his S1 and S2 heart sounds were both normal. The electrocardiogram indicated no ST-T changes with any sinus rhythm, and the chest X-ray was normal. There were no unusual changes, and the P/A was soft.

The results of hematology laboratory test shows hemoglobin 13.6 g/dl, platelets 311 x103/uL, white blood cells 8.5 x103/uL, neutrophils 62%, lymphocytes 31%, monocytes 05%, eosinophils 02%, and basophils 00%. While bilirubin totals 0.71 mg/dl, SGPT 40U/L and alkaline phosphate was 219 U/L. Serum electrolyte report was founded normal too, sodium (Na+) 139 mmol/L and potassium (K+) founded 3.6 mmol/L.

Neurological Test Reports

The patient's central nervous system test showed normal higher functions, no motor sensory disturbances, and bilateral plantar flexor distortion. The electroencephalogram of the brain revealed regular electrical waves with some electrode features, confirming the absence of seizure detection.

The patient's brain MRI showed a slight focal blur hypertensive area near the cavernous sinus in the right parasellar zone, as well as slight swell hypersensitivity in the left cavernous sinus. In addition to right maxillary and ethmoid sinusitis, the MRI scans showed no blooming restrictions.

The patient`s medication chart is described in table 1.

Medication	Dosage
Tab. Epival	500 mg
Tab. Topagen	50 mg
Tab. Clonzi	0.5 mg
Tab. Amtac	100 mg
Tab. Librax	7.5 mg

Table 1 showing the 4 years medication chart of patient

Discussion

The patient was diagnosed with absence seizures as well as tonic-clonic seizures, according to the above medical results and laboratory studies. The patient in this case was experiencing absence seizures that progressed to temporary loss of consciousness.

The diagnosis indicated that there was an increase in cerebral blood flow, increased intracranial pressure, and subsequent seizure development; this was apparent in Mr. EA's case. The pathophysiology

of the patient showed neuronal changes that contributed to changes in the reticulothalamocortical circuitry, which could be linked to a hereditary risk of absence seizures.

The patient did not have any symptoms during his childhood, but they only appeared in his teenage approximately at age of 18. Increased oscillatory activity in the reticulothalamocortical circuitry was found to be the cause of absence seizures in a study by Avanzini et al., making it a promising diagnostic method in this patient.

The patient was treated with the drugs listed in Table 1 after a week in the hospital. His vital signs were found to be fine after a detailed examination. He tolerated the drugs well, and his dietary intake was regular. He made a significant change in his condition and had no further seizures. Stress management, relaxation techniques, and routine sleeping with a balanced diet were recommended to the patient. Every eight weeks, the patient was asked to come in for a checkup. He was suggested to take medicine regularly for at least 45 months. The patient used to take medicine regularly in time and his condition become good and safe gradually. Now the patient quit medication after 45 months as suggested by the physician.

Conclusion

A clinical pharmacist should be stationed in the clinic to determine risk factors for seizure onset, as early diagnosis and treatment will minimize healthcare costs. Implementing disease prevention and treatment programs, as well as routine patient follow-up care and medication adherence, can minimize an individual's disease burden and hospital visits, thus improving health-related quality of life. The use of these practices by the healthcare team regularly will minimize an individual's healthcare costs and hospital visits.

Patient`s Consent Declaration

The authors attest to having obtained all required patient consent forms. The patient(s) has/have given his/her/their permission for his/her/their photos and other clinical details to be published in the journal by filling out the form. The patients are aware that their names and initials will not be written, and that every attempt will be made to keep their identities hidden, however complete anonymity cannot be guaranteed.

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Volume 2 Issue 4 May 2021