

## Case Report

Access this article online	
Quick Response Code:	Website: <a href="http://www.annalsafmed.org">www.annalsafmed.org</a>
	DOI: 10.4103/1596-3519.82060

# Absence seizure in the elderly

Page | 188

Owolabi L. Femi, S. Sale<sup>1</sup>

Departments of Medicine and <sup>2</sup>Psychiatry, Aminu Kano Teaching Hospital, Bayero University, Kano, Nigeria

**Correspondence to:** Dr. Owolabi Lukman Femi, Department of Medicine, Aminu Kano Teaching Hospital, Bayero University, PMB 3452, Kano, Nigeria. E-mail: [drlukmanowolabi@yahoo.com](mailto:drlukmanowolabi@yahoo.com)

## Abstract

Absence seizure is most common in children. It commonly occurs between 5 and 18 years of age; it is not common before the age of 2 years or after adolescence and it is relatively rare in adults over the age of 50. We report a case of electroencephalography confirmed absence seizure and absence status successfully treated with sodium valproate in an elderly patient with dementia. Differential diagnosis between absence status and complex partial seizure is emphasized.

**Keywords:** Absence seizure, elderly, electroencephalography

## Résumé

Absence saisie est plus fréquente chez les enfants. Il se produit généralement entre 5 et 18 ans ; Il n'est pas commun avant l'âge de 2 ans ou après l'adolescence et il est relativement rare chez les adultes âgés de plus de 50. Nous présentons un cas de électroencéphalographie confi rmé absence saisie absence statut et traités avec succès avec valproate de sodium chez un patient personnes âgé atteintes de démence. Diagnostic différentiel entre le statut de l'absence et de saisie partielle complexe est a souligné.

**Mots clés:** Absence saisie, personnes âgée, électroencéphalographie

## Introduction

Absence seizure is a poorly understood and often misdiagnosed condition. It is a seizure disorder characterized by rhythmic electrical brain discharges of generalized onset. Clinical features include a sudden cessation of ongoing activity, usually without loss of postural tone. Rhythmic blinking of the eyelids or lip smacking frequently accompanies the seizures. The usual duration is 5–10 seconds, and multiple episodes may occur daily. It is most common in children.<sup>[1]</sup> It commonly occurs between 5 and 18 years of age, and is relatively uncommon before 2 years of age or after adolescence and it is rare in adults over the age of 50.<sup>[2]</sup> It is usually idiopathic but can be less commonly caused by vascular malformation, infectious disease, neoplasm and

toxic brain disease. In adults, it is often associated with other forms of epilepsy, including tonic–clonic seizures or myoclonus,<sup>[3]</sup> as well as frontal lobe abnormalities such as cortical atrophy.<sup>[4]</sup>

Absence status epilepticus absence seizure (AS) is a prolonged, generalized, and nonconvulsive seizure characterized by more or less severe impairment of consciousness, at times associated with other clinical manifestations such as automatisms or subtle myoclonic, tonic, atonic, or autonomic phenomena.<sup>[5]</sup>

Porter and Penry *et al.* suggested that absence seizure as well as absence status is rarely seen in patients without pre-existing epilepsy, even if it occurs in later life.<sup>[6]</sup> We report the case history of a patient from our Neurology Clinic to support the view that absence seizure may occur in the elderly.

## Case Report

UD is a 67-year-old known hypertensive man who developed, 3 months prior to presentation in Neurology Clinic, recurrent transient impairment of consciousness each lasting about 10 seconds.

He had an average of 5–6 attacks per day and each attack was followed by amnesia for the event; however, posture was maintained during attacks, and there was no associated convulsion or automatism.

One week earlier, he was admitted to a private hospital on account of frequent and transient lapses in consciousness. In the hospital, he had an episode that lasted almost the whole day and transient ischemic attack was assumed.

Two years previously, he was diagnosed with vascular dementia overseas and had since then been receiving treatment for it. He had no history of epilepsy, diabetes mellitus, sleep disorder or stroke in the past.

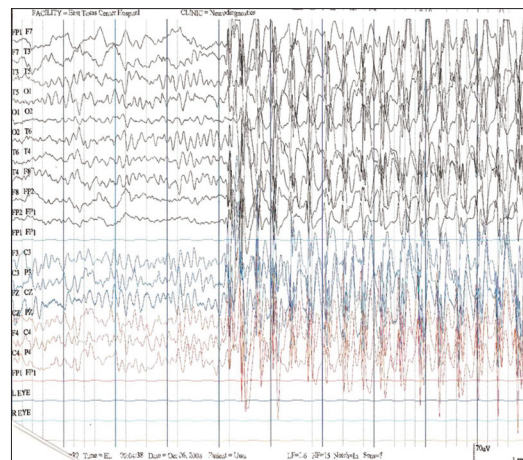
Detailed clinical examination was normal with the exception of global cognitive impairment. A diagnosis of complex partial seizure (CPS) was made initially. Magnetic resonance imaging which was done at the time of diagnosis of dementia as well as computed tomography (CT) of the head, on two occasions, revealed diffuse cortical atrophy and no other structural abnormalities. The results of complete blood cell counts, lipid profile, fasting blood sugar, urine analysis, and serum potassium, sodium, calcium and urea were all normal.

The electroencephalogram (EEG) recorded in a stable state showed generalized 3 Hz spike-and-wave activity lasting the whole recording. The paroxysmal activity was, however, interrupted sharply at irregular intervals by a low-voltage activity lasting 1–8 seconds. Hyperventilation further provoked these epileptiform transients [Figure 1]. Following the EEG finding, the diagnosis was changed to absence seizure, and in retrospect, he must have had status absence seizure accounting for the whole day lapse in consciousness. He was successfully managed with 500 mg (CR) of sodium valproate.

## Discussion

Absence seizure is very rare in adults beyond 20 years of age, particularly in the elderly, and this largely accounted for the delay in definitive diagnosis in our patient who was 67 years old.

In this patient, the diagnosis of absence seizure and/or absence status (also called "ictal stupor" or



**Figure 1:** Electroencephalogram before treatment with sodium valproate, activity mainly consists of slow-wave trains, mixed with alpha rhythm, with short 3 Hz paroxysms

"spike-wave stupor") is based on the occurrence of paroxysms and generalized typical 3 Hz spike-and-wave activity in the EEG of a patient who has recurrent absences. Thus, the EEG was a decisive aid for confirming the diagnosis of typical absence seizure and absence status. It should be noted, however, that the EEG may show spike-and-wave status epilepticus in normal individual,<sup>[7]</sup> a fact that stresses the significance of careful clinical observation. Of note is Panayiotopoulos *et al.*'s use of the term "phantom absences" to describe clinically elusive and inconspicuous seizure disorder characterized by active clinical absence seizures manifested by mild impairment of cognition as shown with errors and discontinuation during breath counting in video-EEG.<sup>[8]</sup> It should also be emphasized that the phantom absences in these adults do not represent aborted past childhood or juvenile absences modified by age or medical treatment.

Precipitating factors for situation-related absence seizure and absence status in the elderly are diverse, including psychotropic and other seizure-precipitating drugs such as aminophylline, benzodiazepine withdrawal, metabolic imbalance, systemic infections and fever, alcoholism and dehydration.<sup>[8]</sup> However, our patient did not have any of these precipitating factors.

Although cerebrovascular disease is the most common cause of acute symptomatic seizures and remote symptomatic epilepsies in the elderly with predominating partial seizures,<sup>[9]</sup> absence seizures are not reported in this context.<sup>[10]</sup> In spite of the diagnosis of vascular dementia, neuroimaging (MRI and CT brain) did not show vascular event. Neuroimaging showed cerebral atrophy only which could as well be cryptogenous, which is a frequent

finding in late-onset epilepsies.<sup>[11]</sup> The background slow-wave activity on EEG and the cerebral atrophy found on brain imaging could hint the slowing of cognition in this patient.

Because of the rarity of absence seizure in the elderly, a diagnosis of CPS was first entertained. CPS may be clinically difficult to differentiate from absence seizures (AS).<sup>[12]</sup> It was the most essential differential diagnostic problem in our patients, as the therapy is different in CPS from that in absence seizures. In the former, carbamazepine is the drug of choice, whereas in the latter valproate or ethosuximide is preferred. Therefore, the EEG finding is essential for the correct diagnosis and treatment of absence seizure and absence status when seen in the elderly. Panayiotopoulos *et al.*, in their study, stated that absence seizures may be frequently unrecognized or misdiagnosed as CPSs, especially when focal abnormalities are found on EEG. Indeed, a wrong diagnosis of CPSs had been made in our patients.<sup>[13]</sup> This was possibly as a result of the relative rarity of absence seizure in the elderly.

Absence seizure may be typical or atypical. Apart from changes in tone which are more pronounced than those of typical absence seizure, EEG is usually more heterogeneous in atypical than in typical absence seizure. 24-hour ambulatory EEG and video-EEG studies may sometimes be required for making a diagnosis of absence seizures. It was not done in this patient due to unavailability of this facility.

Differential diagnosis between complex partial and absence seizures is based on several clinical features including the presence of aura which may be found in CPSs but usually not found in absence seizures; postictal confusion commonly found in CPS but not found in absence seizures; type of automatism (trunk and leg in CPSs, but face and hands in absence seizures); and duration of single seizures, which is on an average 1 minute in CPSs and 10 seconds in absence seizures. These factors may serve as a clue in distinguishing between CPS and absence seizure, particularly in the absence of EEG. Other differentials to be considered include psychogenic seizure, migraine, transient and global amnesia. Nevertheless, an absence status in the elderly as the first epileptic manifestation can be misdiagnosed due to hidden seizures in youth or to an incomplete history, a situation that was well highlighted by Bauer *et al.*<sup>[14]</sup> Thus, effort should be geared toward a detailed clinical history in a patient like this case.

Absence seizure and absence status in adults is increasingly gaining prominence. Pierre Genton

*et al.* described a group of patients in whom the main seizure type was recurrent, unprovoked AS; infrequent Generalized tonic-clonic seizure GTCS, mostly associated with AS, occurred in 9 out of 11, and infrequent typical absence occurred in 3 out of 1. The distinctive features of the condition made them propose the name "absence status epilepsy" for the specific epileptic syndrome.

Our patient was treated with sodium valproate. In our setting, this drug is cheaper and readily available than ethosuximide. Non-medical treatments that have been used particularly for patients with medically intractable seizures include ketogenic or medium-chain triglyceride diet.<sup>[15]</sup>

Although this is a report of only one patient, it supports the view that absence seizure and absence status should be considered in an elderly individual with frequent or prolonged nonconvulsive impairment of consciousness.

## Conclusion

Absence seizure and absence status can occur in elderly persons. Differential diagnosis with careful clinical documentation and EEG assessment cannot be overemphasized.

## References

1. Shev EE. Syndrome of status petit mal in the adult. *Electro-encephalogr Clin Neurophysiol* 1964;17:466.
2. Lob H, Roger J, Soulayrol R, Regis H, Gastaut H. Les etats de mal generalises a reexpression confusionnelle (etats de petit mal ou etats d'absence). In: Gastaut H, Roger J, Lob H, editors. *Les etats de mal epileptiques*. Paris: Masson and Cie; 1967. p. 91-109.
3. Terzano MG, Gemignani F, Mancia D. Petit mal status with myoclonus: Case report. *Epilepsia* 1978;19:385-92.
4. Gall M, Scollo-Lavizzari G, Becker H. Absence status in the adult. New results including computerised transverse axial tomography. *Eur Neurol* 1978;17:121-8.
5. Thomas P, Zifkin B, Andermann F. Absence status. In: Wasterlain CG, Treiman DM, editors. *Status epilepticus: Mechanisms and management*. Cambridge, MA: MIT Press; 2006. p. 91-108.
6. Porter RJ, Penry JK. Petit mal status. In: Delgado-Escueta AV, Wasterlain CG, Treiman DM, Porter RJ, editors. *Advances in Neurology: Status epilepticus*. vol 34. New York: Raven Press; 1983. p. 61-7.
7. Manhire AR, Espir M. Treatment of status epilepticus with sodium Valproate. *Br Med J* 1974;3:808.
8. Panayiotopoulos CP, Koutroumanidis M, Giannakodimos S, Agathonikou A. Idiopathic generalised epilepsy in adults manifested by phantom absences, generalized tonic-clonic seizures, and frequent absence status. *J Neurol Neurosurg Psychiatry* 1997;63:622-7.
9. Thomas P, Andermann F. Late-onset absence status epilepticus is most often situation-related. In: Malafosse A, *et al.*, editors. *Idiopathic generalized epilepsies*. Eastleigh, UK: John Libbey; 1994. p. 95-109.
10. Tallis R, Boon P, Perucca E, Stephen L. Epilepsy in

- elderly people: Management issues. *Epileptic Disord* 2002;4:533-9.
11. McBride AE, Shih TT, Hirsch LJ. Video-EEG monitoring in the elderly: A review of 94 patients. *Epilepsia* 2002;43:165-9.
  12. Regesta G, Tanganelli P. Late-onset epilepsy and diffuse cryptogenous cerebral atrophy. *Epilepsia* 1992;33:821-5.
  13. Panayiotopoulos CP, Chroni E, Daskalopoulos C, Baker A, Rowlinson S, Walsh P. Typical absence seizures in adults: Clinical, EEG, video-EEG findings and diagnostic/syndromic considerations. *J Neurol Neurosurg* 55:1002-8.
  14. Bauer G, Bauer R, Dobesberger J, Benke T, Walsler G, Trinka E. Absence status in the elderly as a late complication of idiopathic generalized epilepsies. *Epileptic Disord* 2007;9:39-42.
  15. Hemingway C, Freeman JM, Pillas DJ, Pyzik PL. The ketogenic diet: A 3to6-year follow-up of 150 children enrolled prospectively. *Pediatrics* 2001;108:898-905.

**Cite this article as:** Femi OL, Sale S. Absence seizure in the elderly. *Ann Afr Med* 2011;10:188-91.  
**Source of Support:** Nil, **Conflict of Interest:** None declared.

