

Complex partial seizure, disruptive behaviours and the Nigerian Legal System

Aishatu Y. Armiya'u¹, Ayodele Obembe², Usman M. Umar³, Ali I. Shugaba⁴, Oloche Adole⁵

Abstract

Background: Complex partial seizure is an epileptic seizure which results in impairment of responsiveness or awareness such as altered level of consciousness. Complex partial seizures are often preceded by an aura such as depersonalization, feelings of *de javu*, *jamais vu* and fear. The ictal phase of complex partial seizure is often associated with complex activities where an individual may still be able to perform routine task such as walking, though such movements are not planned and are often purposeless. Witnesses' around may not recognize anything wrong.

Method: This is a case of a 43 year old commercial motor cycle driver, who was accused of first degree murder in the year 2000. He was convicted and sentenced to death. Prior to commission of crime, he was diagnosed with complex partial seizure with secondary generalization in 1990 at a tertiary hospital in Nigeria.

Results: During his 15 years stay on death row at a maximum security prison in Nigeria, he had several episodes of seizure

and subsequently developed a depressive disorder. He was placed on medication which includes anticonvulsants and antidepressants by the Forensic Psychiatry team. With regular follow-ups and available medication, he became stable. He was pardoned by the state Governor in 2015 following a recommendation by the Forensic Psychiatry team.

Conclusion: Complex partial seizure comes with altered consciousness and disruptive behaviour, which could result in commission of a crime. Therefore, the strict adherence to the M'Naghten rule by the Nigerian legal system results in strict reliance by judges and not considering these rules in most cases bothering on insanity. This is without taking into cognizance the peculiarity of each case.

Keywords: complex partial seizure, death row, murder, pardon.

Highland Med Res J 2016;16(2):94-98

Introduction

Epilepsy is the most common of all neurological disorders affecting at least 1% of people worldwide (65 million) and nearly 80% of cases occur in developing countries.^{1,2} According to the World Health Organization one person in every 20 may have an epileptic seizure during the course of their lives.² Epilepsy in itself is not a disease; it is a symptom of a neurological disorder and presents with a seizure. There are various types of seizures; one of which is the complex partial seizure. Complex partial seizure starts focally within the brain and causes impairment of consciousness, the frontal lobe seizures often begin with stereotyped clonic or tonic activity.³

During an epileptic seizure, behavioural alteration can be symptom.⁴ It is thus not surprising that

behavioural changes underlying neural mechanisms of seizure are largely unknown.⁴ Debilitating behaviours, induced by complex partial seizure is the focus here. Following a focal complex partial seizure in the brain, there is loss or decrease awareness by the individual. A typical behaviour is automatism which entails the performance of non-reflex movement with conscious volition and this usually last several minutes.^{5,6} This behaviour is quite dramatic and potentially dangerous when the patient exhibits impulsive tendency to wander.⁷ In complex partial seizure, a less common behaviour is postictal psychosis.⁸ Such patients develop delusions, paranoia and other acute psychotic symptoms. Often there is associated altered emotional state, agitation and rage.^{9,11} Though, aggression associated with epilepsy is well documented, criminal behaviours associated with seizure activity is rare.¹² Aggressive behaviours occur more frequently during ictal period when patient is unaware of what he is doing and manifests as resistive violence.¹³⁻¹⁴

In every legal system (including the Nigeria Legal System), criminal responsibility and the "Defense of Insanity" are important and peculiar concepts embedded in it.²⁶ This includes the *actus rea* (wrongful doing) and *mens rea* (guilty mind) which are required to be proved beyond reasonable doubts for most crimes.¹⁵ Therefore for this defense to be established, it must be shown that

¹Department of Psychiatry, Jos University Teaching Hospital; ²Department of Psychiatry, Usmanu Danfodio University Teaching Hospital Sokoto; ³Department of Psychiatry, Bayero University, Kano; ⁴Department of Human Anatomy, Faculty of Medical Sciences, University of Jos; ⁵Department of psychiatry and psycho-social services, Nigerian Army Reference Hospital, Kaduna

All correspondences to:
Armiya'u Aishatu Yusha'u
E-mail: aarmiyau@gmail.com

the prisoner was at the relevant time, suffering either from mental disease or from natural mental infirmity so as not to understand what he was doing or control his action or know that he ought not to do the act or make the omission.²⁶

The patient in the case report was charged and convicted of first degree Murder and sentenced to death. However, after 15 years on death row and having been attended to by the Forensic Psychiatry team while in the prison, he became stable with the medication prescribed. The patient, the prisoner, got the governors pardon in 2015 following recommendation by the team.

Case Report

MI, a previously healthy 43 year old right handed male, commercial motor cycle driver and married with two children, presented to the psychiatric outpatient department of a tertiary hospital in Nigeria 25 years ago (aged 18 years). He presented with two months history of seizure, fear and depersonalization, loss of consciousness and amnesia for the event. On few occasions, there were associated tonic clonic activities. A diagnosis of complex partial seizure with secondary generalization was made clinically due to the unavailability of EEG investigation at that time and financial constraints. He was commenced on tablets carbamazepine 200mg BD and was stable on medication but follow-up was erratic. Over the next five years, his medication was increased to tablet carbamazepine 300mg TDS to control the seizure but still follow-up was erratic due to financial constraint. Patient subsequently developed emotional lability with outbursts of anger coinciding with seizure onset which was worse post-ictally and lasting several minutes. In the year 2000, at the age of 28 years following an altercation with a friend, his behaviour became out of place and with an outburst of anger, physical aggression ensued and this led to the death of the friend (victim). Patient was arrested and charged to court, and was later convicted for first degree murder and sentenced to death by hanging.

Following imprisonment, patient had several episodes of seizure because the supply of medication was erratic. The visiting Forensic Psychiatry team started consulting the patient in the prison. The Tertiary Hospital collaborates with the Nigeria Prisons Service to review mentally ill inmates. The patient was first reviewed by the Forensic team in 2006. While in prison, the patient presented with symptoms of low mood, loss of interest in pleasurable activities, low energy, poor sleep and appetite, social withdrawal, feelings of guilt, visual and auditory hallucinations in second person. The symptoms of depression were worst following episodes of seizure. A diagnosis of severe depression with psychotic symptoms in a patient with Complex Partial Seizure secondarily generalized was made.

Despite the prescribed medications, patient was reported to have had several episodes of seizure with specific reference to two major episodes associated with being found in the well on the 11th of November 2007 and self-harm on the 26th of November 2007. These were attributed to poor compliance with medication due to unavailability of medication at that time.

On the 9th of June 2014 the Forensic Psychiatry team was called to the prison at 9pm to review the patient who had several episodes of seizure with postictal confusion and aggression. The prison staff physically restrain the patient in the prison clinic before calling the team. Patient was found physically restrained with scratch marks on his hands and face inflicted by him. He had no memory of the event for three consecutive days due to repeated seizure as the team followed patient up for seven consecutive days. Repeated seizure was due to inadequate medication.

Patient's medication was increased to tablet Carbamazepine 400mg TDS, and tablet Amitriptyline 75mg nocte. Since last episode (June 2014) patient has remained stable on medication with measures put in place to ensure frequent and uninterrupted supply of patients' medication. On the 14th/May/2015, a request was sent to the Forensic Psychiatric team to write a forensic report with recommendations for possible pardon by the State Governor. The report was written and submitted to the welfare department of Nigeria Prisons Service. On the 29th/May/2015 the governor of the state pardoned Mr. M.I on the grounds of mental illness after 15 years on death row. The family is to ensure patient goes for scheduled follow up at a Psychiatric facility for constant and proper review by the Psychiatry team and to provide feed-back on patient's condition to the appropriate authorities on request.

Discussion

Authors described the case of a young man with clinical diagnosis of complex partial seizure with secondary generalization, who due to poor compliance with medication at that time, developed increasing outburst of anger, emotional lability and increased aggressive behaviour which resulted in murder. Patient was arrested and charged to court for first degree murder. Patient was convicted and sentenced to death by hanging by the presiding Judge. Patient had several episodes of complex partial seizure with secondary generalization while in the prison which were eventually controlled with medication. After 15 years on death row he was pardoned by the state governor on the grounds on mental illness in 2015.

Epilepsy is found in up to 0.8% of the population with about 25% suffering from complex partial seizure.¹⁶ A review of literature on case reports of epilepsy and murder by Pandya et al using Cochrane database,

Medline, Index Medicus and bibliography of original articles identified 178 citations, but selected 50 relevant and pertinent murder case reports for their review.¹² Majority of the patients (86%) were males, with mean age of 31.5 years (range 19-52 years). Focal seizures were reported in 30% and 12% had generalized epilepsy. In case of focal seizure, 80% had temporal lobe epilepsy and 20% frontal lobe epilepsy.¹² The patient in the case report is a male which is in consonance with the reviewed articles finding and similar age group (28 years at the time of crime) and in the type of epilepsy (focal with secondary generalization). Majority of patients with epileptic automatism who were found "not guilty by reason of insanity" were poorly compliant with medication.¹⁷ Our patient was not compliant with medication due to financial constraints.

Regarding timing of violent event with seizure, the review found 39 patients (78%) had no clear temporal relationship between seizure and violent event, with only 11 patients (22%) who had the violent episode with a clear temporal relationship to the seizure.¹² The patient in the case report had no clear temporal relationship between violent behaviour and seizure (postictal), but a seizure cannot be ruled out immediately after event. A review reported that 9 of 11 of their patients' (82%) had violent behaviour in the postictal period, while one in the ictal period (9%) and one in interictal period.¹² Another review of 13 cases of epileptic automatism reported that over two-third occurred during the postictal period.¹⁷ A common pattern of postictal behaviour has been described, that is resistive violence.^{13-14, 18} This results when a patient's violence is undirected and passive, occurring as a form of resistance at attempt at restraint. This pattern was described in our patient during previous attempts to restrain patient in the prison following seizure episode.

Following a seizure, various alterations of postictal behaviours have been identified. A typical behaviour is automatism which is the performance of non-reflex movements unconsciously which could last several minutes.⁵⁻⁶ Amongst these is ambulatory automatism which is running or walking. In our case report, the patient fell into the well and harmed self with a knife following a seizure which is possibly due to ambulatory automatism and he had no recall of these events. These behaviours can be quiet dramatic and are potentially dangerous, the patient may exhibit impulsive tendency to wander a times to the street or out of the house.⁷ In this case the patient wandered within the prison yard, outside his room and fell into the well unconsciously. Suicidal attempt and deliberate self-harm were all ruled out.

Post-ictal confusion is a common behaviour following a seizure which could be difficult to distinguish from memory impairment. Focal seizure are less likely to

induce a state of confusion, unless it becomes secondary generalized as tonic clonic seizure. The patient in the case report had complex partial seizure with secondary generalization hence, the confusion he exhibited during his last seizure episode. Such patient actively resist restraint by pushing with angry expression and hitting which possibly resulted in the bruises on our patients face and hands following a seizure episode.¹² The patient had no memory of event for about four days which could be the result of confusion rather than memory impairment at that time. The weakness of the body experienced by patient following seizure episode may reflect the depressed function of the neocortex following seizure, or as a result of the seizure spread to basal forebrain, thalamus and the reticular activating system.¹² Postictal aggression can also occur as it was evident in the case report, but it usually appears due to reaction to stimulus, in this case when prison staffs were trying to calm patient after a seizure episode.¹⁹

At the early stages of hippocampal kindling, postictal behavioural hyperactivity is induced by a non-convulsive hippocampal after discharges (AD).¹² However, with the progression of kindling; motor convulsions are accompanied by hippocampal AD, which results in behavioural hyperactivity. Depressive behaviours following convulsive seizures are well documented as a result of hippocampal and amygdala stimulation and are more pronounced after a seizure.²⁰⁻²² Our patient in the case report experienced depression with psychotic features which are likely as a result of above changes. The latter consequences of such behaviour on receptor function have not been studied though.¹² Imaging studies in human have been conducted and it showed decrease D₂ receptor binding in the striatum of epileptic patients' with peri-ictal psychosis when compared to those without psychosis.²³ It is still uncertain how hyper function underlies postictal psychosis in patients'.¹²

The legal situation of epileptic patients who murder, from a review, showed that 72% of the patients were charged with homicide, after trial 62% of the patients' were convicted of murder.¹² Our patient in the case report was charged with murder and convicted for first degree murder which is similar to what the review found. The patient had no defense and therefore following his conviction he was sentenced to death by hanging and was moved to a maximum security prison to await execution. According to Henry Maudsley, "when a murder has been committed without apparent motive and the reason of it seems inexplicable, it may be by chance that the perpetrator is found on inquiry to be afflicted with epilepsy". Despite this, our patient stayed on death row for fifteen years before being pardoned.

Under the Nigerian legal system, Section 28 of the

criminal code, Criminal Responsibility and the Defense of Insanity provides that “a person is not criminally responsible for an act or omission if at the time of doing the act and or making the omission he is in a state of mental disease or natural infirmity as to deprive him of the capacity to know that he ought not to do the act or make the omission”.²⁴ In the case report, this was either overlooked or not given any consideration which resulted in a death sentence. This can be viewed based on the fact that despite the concept of criminal responsibility or defense of insanity in our legal system, many lawyers still do not know the right steps to take in the institution of the insanity defense in law suit. On the other hand, most Judges do not know what to look out for when such defense is claimed.

For one to be criminally responsible for an act or an omission under the Nigeria legal system, he must have the capacity to understand what he is doing, or to know that he ought not to do the act or make the omission and to have the capacity to control his action. In the absence of this, a defense of insanity could be sought. Insanity comes to five categories and the persons' mental condition may affect his responsibility for his conduct. The first category provides “performing the prohibited act in a state of impaired consciousness due to some mental condition or internal cause, in such condition his act is involuntary and is referred to as automatism which might be the case in our case report.

A defendant is regarded as being in a state of automatism when his action is automatic and generally related to operation of external factors upon the brain rather than mental defects. The term automatism is not used in the criminal code, which seem to be an oversight, but appears in the first paragraph of section 24 of the criminal code which provided that “subject to the express provision of this code relating to the negligent acts or omission, a person is not criminally responsible for an act or omission, which occurs independently of the exercise of his will, or for an event which occurs by accident”.²⁵ In the case report, the patient may have acted against his will and as a result of that the victim died accidentally after he was taken to the hospital.

In Nigerian courts, defense of automatism are not used regularly, and for the two cases raised in Nigeria as defense of automatism in the case of State v Ojeka and Public v Iyarmet, all were rejected.²⁶ This is because for a successful defense of automatism, medical evidence will be required. According to Uwaefo, J.C.A “I do not doubt there are genuine cases of automatism, however, a layman cannot safely attempt without the help of some medical or scientific evidence to distinguish the genuine from the fraudulent”.²⁰ The difference between this defense and the defense of insanity is that defense of insanity requires that the involuntariness of the accused's action should be traced to a disease of the mind, while

the defense of automatism recognizes the possibility of such behavioural phenomena occurring in the absence of such disease.

Conclusion

Aggression related to epilepsy has been documented in literatures for a long time. The patients are usually young men, with a long history of drug resistant epilepsy or poor compliance to medication. The violent act is postictal, of sudden onset and related to stressful situations. Our case report was similar as he was male, and aggression was sudden and followed a stressful situation. This long history of epilepsy was due to poor compliance with medication, and he got better with constant medication in the prison. In our case report, it was not certain if our patient had a seizure before the incident that could potentiate the abnormal behaviour. Our patient was charged to court and sentenced to death following the incident. It should be understood that crimes with no rational motive maybe committed by patients with impaired level of consciousness and thus not fully responsible for their action. Therefore, there is an urgent need for the legal system in Nigeria to avail itself of the steps needed in cases that may involve criminal responsibility and insanity for the proper disposition of such clients.

References

1. Thurman DJ, Beghi E, Begley CE, Berg AT, Buchhalter JR, Ding D. ILAE Commission on epidemiology standards for epidemiologic studies and surveillance of epilepsy. *Epilepsia* 2011;52 Suppl 7: 2-26
2. World Health Organization. Epilepsy. Fact sheets. Retrieved from: www.who.int (Accessed 31st October 2015)
3. Kotagal P, Arunkumar G, Hammel J, Mascha E. Complex partial seizure of frontal lobe onset statistical analysis of ictal semiology. *Seizure*. 2003; 12(5): 268-81.
4. Leung LS, Ma L, McLachlan RS. (2000). Behaviors induced or disrupted by complex partial seizures. *Neurosci Biobehav Rev* 2000; 24: 763–775.
5. Gloor P. Neurobiological substrates of ictal behavioral changes. *Adv Neurol*. 1991; 55:1–34.
6. Niedermeyer E. Neurology aspects of epilepsy. In: Blumer D, editor. *Psychiatric aspect of epilepsy*. Washington, DC: American Psychiatric Association. 1984; 99–142.
7. Mayeux R, Alexander MP, Benson DF, Brandt J, Rosen J. *Poriomania*. *Neurology*. 1979; 29:1616–9.
8. Logsdail SJ, Toone BK. Postictal Psychoses: a clinical and phenomenological description. *Br J Psychiatry*. 1988; 152:246–52.
9. Manchanda R, Miller H, McLachlan RS. Post-ictal psychosis after right temporal lobectomy. *J Neurol Neurosurg Psychiatry*. 1993; 56:277–9.
10. Savard G, Andermann F, Olivier A, Remillard GM. Postictal psychosis after partial complex seizures: a multiple case study. *Epilepsia*. 1991; 32:225–31.
11. Slater E, Beard AW. The schizophrenia-like psychoses of

- epilepsy I. Psychiatric aspects. *Br J Psychiatry*. 1963; 109:95–150.
12. Pandya NS, Vrbancic M, Ladino LD, Telle-Zenteno JF. Epilepsy and homicide. *Neuropsychiatr Dis Treat*. 2013; 9: 667-73.
 13. Marsh L, Krauss, GL. Aggression and violence in patients' with epilepsy. *Epilepsy Behav*. 2000; 1: 160-168.
 14. Ito M, Okazaki M, Takahashi S et al. Subacute postictal aggression in patients' with epilepsy. *Epilepsy Behav*. 2007; 10: 611-614.
 15. Eastman N, Adshead G, Fox S, Lathman R, Whyte S. Forensic psychiatry. Oxford specialist handbook in psychiatry. Oxford University Press Inc., New York, 2012.
 16. Hauser WA, Kurland LT. The epidemiology of epilepsy in Rochester, Minnesota, 1935 through 1967. *Epilepsia*. 1975; 16:1–60.
 17. Reuber M, Mackay RD. Epileptic automatism in the criminal courts: 13 cases tried in England and Wales between 1975 and 2001. *Epilepsia*. 2007; 49(1): 138-145
 18. Akuffo E, Mcguire BE, Choon GL Rehabilitation following matricide in a patient with psychosis, temporal lobe epilepsy and mental handicap. *Br J Hosp Med (Lond)*. 1991; 45(2): 108-109.
 19. Gerard ME, Spitz MC, Towbin JA, Shantz D. Subacute postictal aggression. *Neurology*. 1998; 50:384–8.
 20. Ehlers CL, Koob GF. Locomotor behavior following kindling in three different brain sites. *Brain Res*. 1985; 326:71–9.
 21. Frenk H, Engel Jr J, Ackermann RF, Shavit Y, Liebeskind JC. Endogenous opioids may mediate post-ictal behavioral depression in amygdaloid-kindled rats. *Brain Res*. 1979; 167:435–40.
 22. Caldecott-Hazard S, Yamagata N, Hedlund J, Camacho H, Liebeskind JC Changes in simple and complex behaviors following kindled seizures in rats: opioid and non-opioid mediation. *Epilepsia*. 1983; 24:539–47.
 23. Ring HA, Trimble MR, Costa DC, Moriarty J, Verhoeff NPLG, Ell PJ. Striatal dopamine receptor binding in epileptic psychoses. *Biol Psychiatry*. 1994; 35:375–80.
 24. Section 28: Criminal Code of Nigerian
 25. Section 24: Criminal Code of Nigeria
 26. Articles NG. Criminal Responsibility and the Defense in the Nigerian Legal System. 2013 Retrieved from: [www.articlesng.com/Criminal Responsibility and the Defense in the Nigerian Legal System](http://www.articlesng.com/Criminal_Responsibility_and_the_Defense_in_the_Nigerian_Legal_System), 10/June/2015