Original Article

Orgasm-Induced Seizures: A Case Report and Literature Review

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ABSTRACT

Epileptic seizures induced by sexual orgasm are a form of reflex seizures and are very rare in literature. Reflex seizures are epileptic seizures triggered by some specific stimuli in sensitive patients and are often classified according to the stimuli that trigger them rather than by the seizure type. In our patient, the stimulus is sexual intercourse and orgasm. We report a 28year old right- handed female who experienced focal motor seizures after sexual intercourse and orgasm. Patient had complex focal seizures involving the left upper and lower limbs with loss of consciousness, suggestive of a right hemispheric epileptogenic focus. Orgasm related seizures are very rare, with female and right hemisphere dominance which have been demonstrated in our patient. More case documentation will help improve awareness of this rare seizure type and improve the sex life of those affected.

Keywords: Orgasm, Reflex Seizure, Sexual Intercourse

INTRODUCTION

The International LeagueAgainst Epilepsy (ILAE)defined Reflex epilepsy syndrome as asyndrome in which all epileptic seizures are precipitatedby sensory stimuli.[1] Reflex seizures are caused by a variety of stimuli which include light, music and cognitive phenomenon.[2-4] However, the most reported is that of light known as photo-sensitive epilepsy. Sexual activity as a trigger for epileptic seizures have been reported in literature with most cases reported in women with localization to the right hemispherehere.[2] As a result of the embarrassing nature of symptoms of erotic experiences and sexual sensations related to epileptic seizures, patients tend to hide these symptoms. These symptoms may result in sexual dysfunction as patients may be afraid to reach orgasm and incur a seizure. The sexual functioning of their partners may be affected due to same fear resulting in sexual frustrations, marital conflicts and a negative impact on well-being.[1] We report a case of orgasm-induced seizures with a review of literature.

CASE REPORT

A 28(twenty-eight) year old female presented with a 4 week history of recurrent jerking of the left upper and lower limbs within seconds of achieving orgasm during intercourse followed by loss of consciousness during which she was unresponsive. She was unaware of these occurrences thus her partner reported the seizures. The seizures lasted a

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few seconds followed by post-ictal sleep for about 30minutes. There was no preceding aura, biting of tongue/lips, however she had one episode of urinary incontinence. There was no previous history of seizures in the patient and no family history of epilepsy. There was no history of fever during such episodes and no past history of head trauma. The morbidity had affected their sexual relationship resulting in reduced coital frequency. At presentation, she was 8weeks pregnant with her first baby. Serum electrolytes and full blood count were normal. Her retroviral screening was negative. A brain MRI ordered for was not done due to financial constraints. She declined an electrocardiograph despite counselling because she believed it will have a negative effect on the baby. Patient was commenced on Carbamazepine 200mg twice daily with Folic acid 10mg daily. Seizures decreased in frequency and stopped; however, patient was lost to follow up.

DISCUSSION

Epileptic seizures are seizures triggered by certain types of stimuli which may be visual, auditory, tactile, or cognitive. The most common type of reflex seizures is that precipitated by visual stimuli.[5-7]Reflex seizures are seizures that consistently and objectively, are demonstrated to be evoked by the activity of the patient or by a discrete specific afferent stimulus.[2,3] Afferent stimuli can be classified into unstructured (Elementary) such as light flashes and startle, or structured (Elaborate). Activity may be elaborate, e.g. cognitive function (chess playing and reading),elementary, e.g. motor (a movement), or both such as reading aloud.[2,3] The most common type of this kind of epilepsy is photosensitive epilepsy. Among patients with epilepsies, reflex seizures have a prevalence of 5–6%.[4] In patients with reflex seizures, probably there are regions of cortical hyper excitability that overlap with the areas activated during sensory stimulations. When this part gets activated in response to a reflex stimulus, it may lead to partial or generalized seizures.The first case of orgasm-induced epilepsy was reported in 1960 by Hoenig and Hamilton.[5,8] In an analysis of 15 reported cases by Ozdemir et al, the mean age at the onset of orgasm-induced seizures was 34.3years (range, 20-45 years). Ten (66%)of the 15 patients were females with a mean age at onset of 31.5 years, while the mean age at onset of the male patients was 40.[5]Our patient is female and aged 28years.

The most frequently noted orgasm-induced seizure type from the reported case series was a focal motor seizure with or without impaired awareness. Focal seizures were reported in 8(53.3%) of the patients, two(13.3%) patients had focal to generalized seizures, while 5 of thepatients were reported to have had generalized tonic-clonic seizures.[1,5] The time between orgasm and epileptic seizures varied from seconds to 2hours.[5] Unprovoked and reflex seizures were reported in patients in these case series, however pure orgasm-induced generalized reflex epilepsy in a female was published by Ozakara et al.[1] Our female patient had pure orgasm-induced focal reflex seizures which occurred within seconds from orgasm.

Intra-cranial pathologies were reported in 53% of patients and included hippocampal sclerosis, traumatic sequelae and central nervous system (CNS) tumours.[1,5,8-11] Brain lesions were found in the right hemisphere in 93.3% of these patients with one patient having a bilateral temporal lesion and another a right parasagittal lesion.[5,8-11] The temporal lobe was the most commonly affected right hemisphere lobe.[1,5,8,10] A brain lesion was not found in 47% of patients or the lesion status was unknown.[1,2,5,9,12,13] Our patient brain lesion status was unknown as she did not do a brain MRI due to financial constraints.

Electroencephalograph (EEG) recordings in documented patients with orgasm-induced epilepsy ranged from normal to involvement of the temporal lobe. In a six-case series, EEG recordings of three of the patients showed right temporal epileptiform activity while three showed generalised or bilateral spikes and polyspikes or spike-waves paroxysms.[1,5] In other case series, four patients who had generalised seizures had EEG recordings which were normal.[2,512,13] In a case report by Sengupta et al, ictal EEG recorded for a male patient during intercourse and orgasm revealed 2-2.5 Hz voltage rhythmic delta activity arising from the left temporal

lobe and spreading to the right hemisphere.[5,13] Our patient did not have an EEG recording due to her believe that such a recording will be harmful to her baby.

Certain conditions result in seizures in pregnancy. The main conditions resulting in seizures in pregnancy include first and most frequent uncontrolled pre-existing seizures. A second condition is new onset seizures while a third is some pregnancy-related conditions such as eclampsia.[14,15] Our patient had new onset seizures in pregnancy.

Drug treatment modalities used in treatment of patients with orgasm-induced seizures in documented literature includes phenytoin in early case reports.[11] Other drugs used include valproic acid, carbamazepine, lamotrigine and levetiracetam with some patients requiring combination therapy.[1,2,12,13] Our patient responded to a single drug therapy with carbamazepine.

CONCLUSION

Orgasm -induced seizures have been well documented in literature. Our case being female with focal seizures is in keeping with most documented cases of orgasm-induced seizures as there is female preponderance and partial seizures are commoner in cases reported so far. Although our patient had no neuroimaging due to financial constraints, her clinical manifestation of motor seizures involving the left upper and lower limb would suggest a right hemispheric involvement. She showed good response to treatment with carbamazepine.

We reported this case as there are still too few documented cases of orgasm-induced seizures. Our patient had some challenges in her sexual life with her partner resulting in a reduction in the number of times they had sex to avoid causing her some distress and in addition finding the situation scary. People need to be made aware of this phenomenon so as to make reports as this condition is most likely being under-reported.

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