

CASE REPORT**PSYCHIATRY & BEHAVIORAL SCIENCES**

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Disrobing Associated with Epileptic Seizures and Forensic Implications

ABSTRACT: Little is known about the clinical aspects and medico-legal consequences of disrobing in the context of epileptic seizures. Seizure-related disrobing may occur either as an ictal automatism or during the postictal period. Some patients may experience a seizure while already in the unclothed state, engage in ictal wandering, and thereby appear in public in the nude. Two cases involving disrobing associated with seizures captured via video-monitored electroencephalography are offered. An additional case reveals the legal consequences endured by one patient who experienced a nocturnal seizure and began wandering in an unclothed state. Collectively, these cases illustrate the medical reality of seizure-related disrobing and the related adverse effects on patients' quality of life. Disrobing associated with epileptic seizures carries the potential for serious legal consequences if not properly identified as an ictal phenomenon.

KEYWORDS: forensic science, forensic medicine, forensic psychiatry, seizures, epilepsy, behavioral medicine

There are several ways in which a seizure might result in public nudity. Seizure-related disrobing may occur either as an ictal automatism or during the postictal period. Ictal and peri-ictal disrobing are mentioned only rarely in the neurological literature and never reported in detail. In an early edition of *Merritt's Neurology*, ictal disrobing is referred to as one of the "more unusual behaviors" which occur peri-ictally (1, p. 634). In this same account, automatisms are referred to as behaviors that occur in association with a state of impaired consciousness and amnesia. In our clinical experience, patients seldom broach the topic of disrobing with their physician.

Regardless of how one ends up in public without clothing, it may result in substantial criminal charges and penalties. Even when unexplained nakedness occurs in the medical setting, seizures are infrequently considered in the differential diagnosis (2). When unexplained nakedness occurs in public, seizures are rarely a consideration. The need to consider seizures in cases involving "exhibitionism" was last advanced in two case reports offered by Hooshmand in 1969 (3). The "epilepsy defense," while prominently featured in the forensic literature, is frequently associated with violent or assaultive behaviors (4–6). Many authors have offered cases wherein defendants attribute their criminal actions to seizure activity, although many such claims are substantially lacking in medical credibility, with acts that grossly appear premeditated and deliberate being attributed to seizures. History offers up a

very prominent example in the trial of Jack Ruby, who claimed that he shot Lee Harvey Oswald during a seizure (7). This case, and others like it, has arguably contributed to an atmosphere of cynicism when defendants attribute behaviors to seizures.

While the literature surrounding the "epilepsy defense" and ictal aggression supports a degree of skepticism when seizures are used to excuse otherwise criminal behaviors, it is notable that this literature is almost exclusively focused on violent crime. Many authors have established that seizures rarely yield violence. And when seizures do yield aggression, the behavior is poorly directed and does not involve planning, intricate skills, or purposeful behavior (4–6,8). However, there remain other behaviors that may manifest during or after a seizure, that potentially yield criminal charges, and that are sparsely reflected in the current literature. These behaviors may not warrant the skepticism afforded to the "epilepsy defense" in the context of violent crime. Disrobing associated with epileptic seizures represents such an exception.

In light of the paucity of attention paid to the topic, and a legal atmosphere that is particularly adverse to crimes of a sexual nature, the need to establish the potential legitimacy of the "epilepsy defense" is apparent. The authors offer the following case series in support of the reality of disrobing associated with epilepsy.

Methods

Patients experiencing seizure-related disrobing were retrospectively identified via chart review at the Epilepsy Clinic at the University of Colorado Denver Health Sciences Center. Medical records were reviewed for clinical presentation, localization, imaging data, and forensic consequences in a series of patients with ictal, postictal, and coincidental disrobing. We defined coincidental disrobing as a seizure occurring when the patient was already in an undressed state. Ictal/postictal disrobing was defined as disrobing occurring after the patient's seizure began. Local institutional

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Illustrative Case Series

Documented Ictal Disrobing

Case #1 involves a woman in her mid-30s with seizures that begin with an aura of “needing to look for something” followed by prominent sensations of heat. The patient often fans herself during seizures. During a clinic visit, she was observed to have a complex partial seizure during which she reached into her blouse and pulled out her bra. In the epilepsy monitoring unit (EMU), she had two complex partial seizures, one of which involved disrobing behavior. The seizure began with her sitting in bed talking to her husband in a normal fashion. She then became unusually restless. Ten seconds after the onset of 4-Hz right temporal activity, chewing movements began. Thirty-two seconds after the onset, she began fanning herself with her right hand. Two minutes ten seconds after the onset, the electrical activity stopped for 8 sec. It then resumed at 8 Hz in the right temporal electrodes; after another 5 sec, she unbuttoned her pajama top with both hands. Bilateral rhythm ictal electrode activity continued to gradually increase in amplitude. Fifty-five seconds after the unbuttoning, she picked up a newspaper in her right hand and fanned herself for 10 sec. The seizure then evolved into a secondary generalized tonic/clonic seizure.

Documented Postictal Disrobing

Case #2 is an example of disrobing that is postictal and involves a man in his early 30s with a history of pharmacologically intractable seizures. With nearly 80% of ictal events, he removes his clothing and tries to leave the vicinity. Complex partial seizures occur at a frequency of about one a week and frequently secondarily generalize into tonic/clonic seizures. In the EMU, a right temporal lobe onset complex partial seizure with secondary generalization was captured. He remained quiet postictally for 2.5 min and then sat up in bed and pulled off his shirt. After an additional 30 sec, he pulled off his head wrap and then removed his trousers. The patient had another seizure with a right temporal lobe onset that did not secondarily generalize. Electrographically, it lasted 22 sec. Thirty seconds after this electrographic event ended, he quickly removed all of his clothing.

Coincidental Disrobing

Case #3 involves a man in his early 40s who began having generalized tonic/clonic seizures at the age of 30. They almost invariably occur during sleep with a frequency of one per month. Brain magnetic resonance imaging (MRI) and routine electroencephalography (EEG) were normal. He reportedly had a generalized tonic/clonic seizure while sleeping in the nude with his girlfriend. He got out of bed and wandered into the hallway where he was seen by his girlfriend's underage daughter. He did not acknowledge her presence. He is amnesic to this incident. He was convicted of indecent exposure to a minor and incarcerated.

Discussion

It has long been recognized that behavioral manifestations of seizures may incur legal consequences. In 1888, Charcot described a patient who encountered legal trouble after boarding a train

without a ticket during nonconvulsive status epilepticus (5). The medical literature suggests that epileptic seizures are very rarely the cause of criminal acts (5,6,9). However, this literature largely consists of cases in which criminal defendants attribute their violent acts to seizures (4–6). Consistent with a medical literature that establishes that violent manifestations of seizures are rare, such defense strategies seldom prove successful, and are frequently viewed by courts with great skepticism.

This case series demonstrates that epileptic phenomenon can and do result in disrobing behaviors that may result in adverse legal outcomes for genuine epilepsy patients when such behaviors are erroneously misconstrued as criminal acts. The essential differences between ictal disrobing and exhibitionism are outlined in the two case reports by Hooshmand (3); these authors provide an early and clear indication that there exist instances of ictal disrobing that constitute legitimate legal defenses. But the medico-legal literature since that time has essentially neglected ictal disrobing and has instead focused on the evidence linking seizures and violence. At the same time, society's intolerance for criminal acts of a sexual nature has resulted in escalating consequences and near-zero tolerance for precisely the sort of behaviors that may be the product of ictal disrobing. The resulting legal atmosphere is one that may scoff at legitimate defenses involving ictal disrobing while dispensing improper convictions and unwarranted punishments.

Those familiar with criminal courts can attest to the fact that offenses of a sexual nature are aggressively prosecuted. A review of the Colorado statute and case law illustrates the potential hazards lurking in criminal courts for the unfortunate epilepsy patient who publicly disrobes during (or just after) a seizure. When automatisms involve undressing or other actions that may appear sexual in nature (such as pelvic thrusting), charges of either public indecency or indecent exposure may ensue. Under certain circumstances, indecent exposure may be classified as a felony. As evidenced by one of our cases, when a patient's seizure-related behavior involved a child, the law provided for additional sanctions as a sex offense against children entailing the need to register as a sex offender and all of the social and legal consequences associated with this status. Certainly, the misapplication of these penalties and related stigmas to behaviors that are genuinely the result of a seizure represents a serious medico-legal failure and an outcome that is to be avoided. As such, it is essential that courts and medical experts realize that epilepsy's checkered medico-legal history with violent crime is not broadly applicable to all ictal behaviors. The reality of genuine ictal disrobing as a viable defense must be recognized.

Of course, recognizing the reality of seizure-related disrobing does not obviate the need for case-by-case assessment of legitimacy for such claims. The ability to thoughtfully consider claims of ictal disrobing, identify legitimate instances, and gauge the need for further neurological consultation will be an important skill for attorneys and consulting physicians. Although the precise neurobiology of disrobing associated with epileptic seizures is beyond the intended scope of the present article (and will be the subject of a separate publication), some guidance in initially assessing the viability of such affirmative defenses is warranted. Fenwick and Walker (10) offer a useful set of six points in considering whether a potential illegal act was the result of a seizure. While these guidelines were not written with ictal disrobing in mind, they are readily applicable to such instances. The consulting expert, before attributing any otherwise criminal behavior to a seizure, should investigate the following points:

- The patient should have a prior diagnosis of epilepsy. Criminal behavior resulting from a patient's first seizure is very unlikely.

- The act should be out of character for the individual and contextually inappropriate to the surrounding circumstances.
- Evidence of premeditation or concealment should be lacking.
- Witnesses, if available, describe a disorder of consciousness at the relevant time.
- Memory for the act should be impaired.
- The diagnosis of automatism/epilepsy is a clinical diagnosis. While studies (EEG or MRI) may be helpful, the diagnosis must ultimately derive from clinical grounds.

These considerations, together with the knowledge that seizures may yield behaviors involving the removal of clothing or wandering in the unclothed state, should assist the medical expert in recognizing legitimate opportunities for a seizure defense. This in turn should further the goals of the justice system by avoiding the inappropriate criminalization of actions that are demonstrably the product of seizures and lack the requisite legal element of *mens rea*.

Conclusions

Seizure-related disrobing may not be an uncommon behavior. We identified cases involving ictal disrobing, including events captured with video-EEG monitoring, definitively establishing the medical reality of such behaviors. Epilepsy's history in courts of law has been infamous. A track record featuring many dubious "epilepsy defenses" has yielded a legal atmosphere of skepticism to such claims. However, the evidence and anecdotes behind this history are largely specific to violent crimes and ictal aggression and should not be generalized to other actions that may be attributable to seizure activity. The clinical phenomenon of disrobing associated with epileptic seizures needs to be recognized by both medical and legal professionals, and appropriate defense strategies

warrant meaningful medico-legal consideration. Without this understanding, seizure patients are liable to incur unjust verdicts and punishments, further adding to their stigma and suffering.

References

1. Rowland LP, editor. Merritt's textbook of neurology, 7th edn. Philadelphia, PA: Lea & Febiger, 1984.
2. Maytal G, Smith FA, Stern TA. Naked patients in the general hospital: differential diagnosis and management strategies. *Psychosomatics* 2006;47(6):486–90.
3. Hooshmand H. Temporal lobe seizures and exhibitionism. *Electroencephalogr Clin Neurophysiol* 1969;27(5):550.
4. Marsh L, Krauss GL. Aggression and violence in patients with epilepsy. *Epilepsy Behav* 2000;1(3):160–8.
5. 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):138–45.
6. Treiman DM. Violence and the epilepsy defense. *Neurol Clin* 1999;17(2):245–55.
7. Gutmann L, Jack Ruby. *Neurology* 2007;68(9):707–8.
8. Treiman DM. Psychobiology of ictal aggression. *Adv Neurol* 1991;55:341–56.
9. Brown S, Bird J. Continuing professional development: medico-legal aspects of epilepsy. *Seizure* 2001;10(1):68–73.
10. Fenwick P, Walker MC. Epilepsy and the law. In: Sander JW, Rugg-Gunn FJ, Smalls JE, editors. *Epilepsy 2009: from benchside to bedside. A practical guide to epilepsy. Lecture notes from the Twelfth Epilepsy Teaching Weekend; 18–20 Sept 2009; St Anne's College, Oxford, UK. Chalfont St Peter, Bucks: International League against Epilepsy (UK Chapter) & National Society for Epilepsy, 2009;18–20.*

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