Case Report

A patient with epilepsy charged with kidnapping, unlawful confinement, and assault causing bodily harm after seizures: Deficiencies in the legal system

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1. Introduction

The association of criminal acts and epileptic seizures is an uncommon event and it is not commonly reported in the literature [1]. If such association is present, seizures are commonly considered as a defense or mitigating factor in criminal trials [1]. The idea that epileptic seizures may be linked to aggressive behavior and crimes of violence in the late nineteenth and early twentieth century, supported by writings of the Italian Professor of Psychiatry and Criminal Anthropology, Cesare Lombroso [2]. Lombroso tried to discern a potential relationship between criminal psychopathology and physical or constitutional defects. His main theory quoted by him is “the existence of a hereditary, or atavistic, class of criminals who are in effect biological throwbacks to a more primitive stage of human evolution” [2]. Lombroso contended that such criminals exhibit a higher percentage of physical and mental anomalies than non-criminals [2]. A potential link between an epileptic seizure and violence was also made around the same time by Hughlings Jackson, considered one of the founding fathers of epileptology [3]. In 1875, Jackson published an article entitled “On temporary mental deficiencies in the investigation of the relation between epileptic seizures and criminal acts. The review draws interesting observations: a) the literature on the relation between epileptic seizures and criminal acts is not conclusive, b) behavioral disturbances often seem more closely related to comorbidities of epilepsy than particular seizures characteristics, c) these comorbidities are often not well-described, d) the reviewed literature suggests that there are very rare occasions when criminal acts are committed during the ictal or postictal period, mostly by patients with focal epilepsy. The authors suggest that there is an urgent need for more systematic and detailed descriptions in order to allow a more detailed investigation of the relation between epileptic seizures and criminal acts.

2. Case report and legal outcome

We report the case of a 34-year-old right-handed male with drug-resistant epilepsy who committed multiple criminal offenses. Our patient began to experience seizures at the age of 13. He had two types of epilepsy surgery for resection of the cavernoma. The patient was rendered seizure-free after resection of the cavernoma for one-year. Due to the occurrence of seizures before the alleged acts, the patient was in a car coming out from a dance class. He was arrested and taken to the police station. Later that day, the patient was being interrogated by a police officer when he had a hypermotor seizure at the end of the interview. He punched the policeman leading to multiple charges laid, including kidnapping, unlawful confinement, and assault causing bodily harm. He remained in jail for the next year and a half. During this time, he had epilepsy surgery for resection of the cavernoma. The patient was rendered seizure-free after resection of the cavernoma for one-year. Due to the occurrence of seizures before the alleged “kidnapping” and based upon his interview with the policeman, the patient was acquitted from all legal charges. We review available cases of non-homicidal criminality with a legal outcome in this article.

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The first seizure type was focal seizures with impaired awareness described as staring spells, a lack of awareness, lasting 40 to 50 s with post-ictal confusion. The second type of seizure was typical a hypermotor seizure with at least 80% of the seizures happening at night. The latter type are characterized by no warning, non-sensical speech at onset, sudden hypermotor activity, often aggressive ictal and postictically, not aware, with postictal confusion, and no clear lateralization. Most of the time, the patient is found running away from the scene but always coming back eventually. The family described the presence of at least one hypermotor seizure per month and one focal seizure with impaired awareness per month since the age of 13, with the longest period of seizure freedom of 6 months which occurred twice at 15 and 20 years old. The patient was assessed by a psychiatrist and a diagnosis at the age of 15 with attention-deficit hyperactivity disorder. Regarding his medical history, he also had a history of drug abuse on and off over the years (cocaine, marijuana and alcohol). Patient continued having seizures for many years with no clear diagnosis till the age of 29 years old when he had a witnessed tonic–clonic seizure. He was seen in the hospital emergency room and referred to an epileptologist. An MRI of the brain showed a lesion over the left cingulate area consistent with a cavernous vascular malformation (Fig. 1). He was started on lamotrigine 100 mg PO BID, later combined with clonazepam 10 mg PO BID. He underwent video-EEG monitoring three years later (July 2016) after the diagnosis because the seizures were resistant to antiseizure medications. During video-EEG monitoring two seizures were recorded. One of them was a hypermotor seizure consistent with the typical description by the parents. At the end of the seizure, he ran away from the bed, grabbed a nurse, kissed her, and then, went back to the bed. The other seizure was a focal seizure with impaired awareness: he “spaced out” for 50 s and was clapping during the seizure. Interictally, the EEG showed bifrontal spikes at Fp1, Fp2, but also at F7, Sp1. During the two seizures the EEG showed initial bifrontal spikes at Fp1 and Fp2, but maximal expression at Fp1, F7, T3 and Sp1, followed by delta slowing in the same electrode derivations with subsequent diffuse delta activity.

Three months after video-EEG monitoring was performed, he had a focal seizure with impaired awareness, and then tried to grab a 7-year-old girl who was in a car coming from a dance class. The mother of the girl saw the patient staring before the incident seemingly unaware but outwardly acting aware as he had helped open the door of the car for the mother and girl. The mother asked him few questions with no answer but with automatic behavior. After the girl was in the back seat the patient tried to grab the girl and the mother screamed, and other people arrived at the scene to assist the mother. The patient ran away, and then, he came back to the scene to apologize and wait for the policeman. His behavior was abnormal during this time and while traveling to the police station; he seemed confused the entire time. Later that day the patient was being interrogated by a police officer when he had a hypermotor seizure at the end of the interview. He had gibberish speech and proceeded to have a hypermotor seizure similar to the one recorded in hospital. He punched the policeman during the seizure which led to an additional assault charge. By the end of the day, the patient was charged with kidnapping, unlawful confinement, and assault causing bodily harm on two accounts. The patient had not been taking his anti-seizure medications properly days before the incident. The patient had an initial trial, where he was found guilty of kidnapping, unlawful confinement, and assault causing bodily harm to the girl and also to the police officer. He remained in jail for 18 months. His lawyer was able to get a second trial defending the patient on the grounds of his medical condition. During his time in jail, there was a consensus that the patient was candidate to have the resection of the cavernous malformation, and he finally had epilepsy surgery 18 months after the charges were levied. The patient rendered seizure-free after the resection of the cavernoma for one-year. His behavior improved with no seizures or incidents, and he has been free of any recreational drugs. After the surgery, the patient remained on house arrest for a year until the trial was over. The defense lawyer asked a medical legal expert to review the clinical history including imaging and EEG findings, the transcripts from the previous trial and other relevant documents. The prosecutor argued the use of drugs as the cause of the incidents and that he was malingering. There was no evidence of drug use prior to the incident, and more importantly there was a clear occurrence of a seizure before the attempted “kidnapping” and during the interview with police. The seizures that happened during the incidents were similar to the ones recorded during video-EEG monitoring. In the end, the patient was acquitted of all the charges due to having strong evidence of a seizure disorder leading to the associated criminal behaviors.

3. Literature review and discussion

The association of criminal acts and epileptic seizures is a very rare event, and it is not well-described in medical literature. Cases happen sporadically in different countries, and some of them are reported in newspapers or other kind of media but are not commonly reported in medical articles. Very infrequently, epilepsy has been used as a defense against charges of murder, homicide, manslaughter, or disorderly conduct [4]. The idea that epileptic seizures could be associated with aggressive behavior and crimes of violence dates back at least as far as the late nineteenth and early twentieth century [2]. From the eighteen century, there is the notion that patients with epilepsy, especially when they have focal seizures or are in the postictal period, could exhibit episodes of bizarre and violent behavior. Our case is one of the few complete available descriptions of a patient who was accused of kidnapping, unlawful confinement, and assault related with seizures with complete exoneration.

A recent review by Saleh et al. [1] reviewed all the available literature regarding epileptic seizures and criminal acts in PubMed till May 2019. Surprisingly, they only reported 49 cases, and many of them did not have the completed legal information. The review suggests that there are very rare occasions when criminal acts are committed during the ictal or postictal period, mostly by patients with focal epilepsy, although they concluded that the relation between epileptic seizures and criminal acts is not conclusive [1]. Interestingly the authors suggest that behavioral disturbances often seem more closely related to
comorbidities of epilepsy than particular seizures characteristics, though these comorbidities are often not well-described, calling for an urgent need for more systematic analysis of data and also an improvement in the reporting of cases. PubMed has been indexing biomedical literature since 1879, and the review of Saleh et al. [1] only shows 49 cases, highlighting the need for more reports in the area, describing more detailed information about the type of epilepsy, presence of structural lesions, interictal behavior, detailed description of offenses, psychiatric comorbidity, among other aspects.

Over the years, different researchers have identified characteristics of the violent acts related with epilepsy. Violent acts related with epilepsy occur suddenly, without evident planning, they are short-lived, fragmentary and unstained events, stereotyped, occur after stress, can occur hours or days after seizures, mainly after clusters, usually amnestic of the events, with remorse after events, recurrent and related with alcohol abuse. In our patient the acts (kidnapping, unlawful confinement, and assault) occurred after seizures when the patient was confused, and he was amnestic of the events. One of the main aspects related with the defense of the case was the fact that kidnapping is a very elaborate crime typically requiring preparation. In this case, he was accused of this paroxysmal behavioral activity during a seizure without any pre-planning. It is generally agreed among epileptologists that well-organized, purposeful, complex, goal-directed behavior is highly unlikely during a seizure [5]. In our patient, the first offense occurred in the post-ictal period but the second offense (punching the police) happened during a seizure (goal directed behavior). Also, researchers have identified some characteristics which make a patient more prone to having violent events. These characteristics include young males aged 20 to 50 years, seizure onset during childhood or adolescence, antiseizure drug resistance, unemployment, a history of

| Author/Case report | # of patients in study | Gender/age | Foci location | Time | Offense | Charge | Final disposition |
|--------------------|------------------------|------------|--------------|------|---------|--------|-------------------|
| Oueslati et al. 2018 | 2 | M/26 | Right parietal | Postictal | Attempted to rape aunt | Rape | AFI, CMH |
| Tuft & Nakken 2017 | 1 | M/39 | Right TLE | Postictal | Stabbed brother with a knife | NS | AFI, CMH |
| Every-Palmer & Norris 2013 | 1 | M/54 | Left TLE | Postictal | EMS staff responded to a call about him being unconscious. He leaped up, grabbed a knife, and attacked the paramedics. He later attacked the police officers with “superhuman strength.” | Assault with a weapon | AFI and CMH |
| Kim et al. 2010 | 8 | M × 6 | Each had either FLE or TLE; not specified per patient | Post-ictal, alcohol-induced, or NS | Physically assaulted brother-in-law | Rape × 3 | CMH for all |
| Reuber & Mackay 2008 | 10 | NS | NS | NS | Broke into a shop to steal a jacket | Assault with GBH | CMH |
| | | | | | Exacerbated an electrical fire with paper | Burglary | CMH |
| | | | | | Stabbed wife and locked child in cupboard | Wounding with intent, unlawful confinement | CMH |
| | | | | | Assaulted an acquaintance that owed gambling debt, attempted to set said person on fire | Assault with ABH and attempted GBH | AFI |
| | | | | | Attempted kidnapping in daylight with parent nearby | Attempted kidnapping | AFI |
| | | | | | Attack paramedic after seizure | Assault with ABH | AFI |
| | | | | | Assault of police officer | Attempted kidnapping | AFI |
| | | | | | Assaulted a woman’s arm as part of an automatism | Attempted kidnapping & assault with ABH | AFI |
| Treiann 1999 | 3 | M/35 | UL | Intercital | Had a complex partial seizure and grabbed onto a head-butt the victim, unprovoked | Attempted child abduction | CMH |
| McNulty, Cahil, & Tomé de la Granja 1999 | 1 | F/36 | FLE | Postictal | Total of 8 incidents of attempted child abduction both in and out of hospital. The attempts were characterized by witnesses as impulsive and unsophisticated. | Attempted child abduction | AFI |
| Bacon & Benedek 1982 | 1 | M/26 | Right TLE | Postictal | Patient became anxious in family home, left abruptly down the street where he encountered a middle-aged woman walking her dog. He subsequently attacked her and removed much of her clothing before being stopped by a passerby. | Felony assault and criminal sexual conduct | AFI |

AFI: acquitted for insanity, CMH: conviction in a mental hospital, IJ: Imprisonment-jail, UL: unspecified location, NS: Not specified, FLE: frontal lobe epilepsy, TLE: temporal lobe epilepsy, GBH: Grievous Bodily Harm, ABH: Actual bodily harm.
4. Conclusion

Non-homicidal criminality associated with epilepsy has been described in the literature for more than a century, although cases are rarely reported in medical literature and the available descriptions many times do not specify the type of epilepsy, presence of structural lesions, epilepsy surgery, comorbidity, among other aspects. In our review, non-homicidal crime is mainly postictal, and patients typically have focal epilepsy with frontal or temporal localization. Our case is unique because the defense lawyer was able to use the patient’s medical condition and the successful outcome from epilepsy surgery as a defense to mitigate legal charges against the patient. The patient was fully exonerated after trial and demonstrates the outstanding and life changing benefits of epilepsy surgery. Given the paucity of information, it is clear that further case reports with detailed description of the seizure disorder and legal outcomes are needed. We hope that our case will add to semiologies misinterpreted as criminal and help decrease the negative perception of epilepsy in the society.

Conflict of interest

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We confirm that we have read the Journal’s position on issues involved in ethical public.

Ethical statement

The work described has been carried out in accordance with the Code of Ethics of the World Medical Association (Declaration of Helsinki).

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