Psychiatr. Pol. 2024; 58(2): 303–313
PL ISSN 0033-2674 (PRINT), ISSN 2391-5854 (ONLINE)
www.psychiatriapolska.pl
DOI: https://doi.org/10.12740/PP/OnlineFirst/154806

Insanity as a consequence of an epileptic seizure and precautionary measures

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Summary

The analysis covers the case of a driver suffering from epilepsy for many years, who during an epileptic seizure, in a state of profound disturbance of consciousness, caused a road accident. Such situations usually result in the perpetrator being considered insane in relation to the allegation. The task of expert psychiatrists and psychologists is then to assess the likelihood of the perpetrator of the prohibited act repeating it, and to indicate to the court the optimal therapeutic precautionary or penal measure. These legal solutions also apply to perpetrators who were considered insane due to disturbances of consciousness occurring in the course of various somatic diseases, and not permanent mental disorders. Currently, there are no grounds for appointing expert neurologists, diabetologists, cardiologists, pulmonologists, and other specialists who would assess the legitimacy of taking precautionary measures, which may raise judicial doubts. Moreover, applying in such cases only the measures indicated in Article 93a § 1 of the Penal Code does not find any psychiatric and psychological justification. Consideration should be given to extending the catalog of protective measures to include the therapy of various somatic diseases in order to minimize the risk of developing deep mental disorders in the future. The work proposes new opinion-making solutions, which, however, requires changes in legal regulations.

Key words: epilepsy, insanity, precautionary measure

Introduction

Under Article 31 of the Penal Code, the causes of insanity, apart from mental illness and mental retardation, include other disturbances of mental activities, which may be chronic or temporary [1, 2]. The latter include, inter alia, consciousness disorders resulting from intoxication and various somatic diseases (brain tumors, renal, hepatic, cardiovascular, and respiratory failure, diabetes) as well as epilepsy [3]. Epilepsy is a chronic disease leading to the occurrence of paroxysmal neurological disorders [4] and its prevalence is estimated at 0.5–1.0% of the entire population [5]. Some seizures

are characterized by disturbances of consciousness accompanied by disturbances in perception, emotions and the motor sphere [6].

There are no precise data on the percentage of patients with epilepsy driving motor vehicles. This is due to different national sources of information, different standards for applying for a driving license, and different health monitoring systems for potential drivers. Hence the estimates that from 3% to 90% of people diagnosed with epilepsy drive vehicles and slightly more have a driving license (from 8% to 98%). It is noteworthy that a significant group of patients with epilepsy (nearly 40%) drive road vehicles in violation of the law (they conceal the fact of the disease, its course and treatment) [5, 7–11]. The main obstacle to safe driving in this group of drivers is the possibility of an epileptic seizure while driving, with accompanying disturbances of consciousness or awareness and, consequently, loss of the ability to control the vehicle [9, 12]. Confirmation of such a clinical fact may be very difficult in forensic-psychiatric and psychological judgments, as is the case with disturbances of consciousness in the course of Stokes–Adams syndrome (repeated episodes of loss of consciousness due to insufficient blood supply to the brain), diabetes or post-stroke conditions [10].

Among road accidents related to the presence of epilepsy, 8% to 19% occur during the first epileptic seizure [10]. The first two years of the disease, i.e., the period of refining the diagnosis and assessing the effectiveness of treatment, are considered the most dangerous in terms of road accidents [10, 13], although they are generally not associated with serious consequences (approximately 0.2% with a fatal outcome) [5, 13–15].

It is difficult to clearly indicate which types of epilepsy are associated with the greatest risk while driving [9]. The most common are focal seizures with impaired consciousness and generalized tonic-clonic seizures [16, 17].

In many countries, a person suffering from epilepsy is obliged to report this to the driving license authorities – concealing the disease voids the insurance contract. The assessment of the ability to drive a vehicle takes into account the type of epileptic seizures, systematic and effective treatment, coexistence of other diseases (cardiovascular, vision, diabetes) and the possible use of psychoactive substances [5].

In various jurisdictions, an offense committed in a state of profound disturbance of consciousness during or shortly after an epileptic seizure usually results in the perpetrator being considered insane with respect to the allegation [9, 18–20]. In Polish legislation, the determination of insanity of such an offender is associated with the necessity to assess the legitimacy of taking precautionary measures, which is performed by expert psychiatrists and a psychologist [21]. Pursuant to Article 93a of the Penal Code, precautionary measures that can then be used (also in the case of patients with epilepsy) are: electronic control of the place of stay, therapy, addiction therapy, and stay in a psychiatric institution [21]. They are primarily aimed at securing the society against the threat to the legal order from an insane perpetrator [22], regardless of the source of insanity. A similar procedure of criminal proceedings against this group of perpetrators is also in force in other legislations [18].

The frequency of various mental disorders (psychotic, affective, anxiety, and personality disorders) in epilepsy patients is at least several times higher than in the general population, as well as in people with other chronic somatic diseases [17, 23], which should be taken into account by psychiatry and psychology experts in the assessment process. On the other hand, the very diagnosis of epilepsy does not necessarily imply a coexistence of mental abnormalities.

On the basis of Article 99 of the Penal Code, orders and prohibitions specified in Article 39 points 2–3 of the Penal Code can be adjudicated against an insane perpetrator [21]. Their importance in the last decade has increased significantly [24]. They are also preventive in nature – securing the society against the negative effects of dangerous behaviors of people who cannot be held criminally responsible, for example due to lack of guilt [22, 25]. They can be used in parallel to therapeutic agents or in an isolated manner [26]. They include a driving ban, which is to prevent acts against safety in land traffic (including air and sea) [25]. In order to be able to adjudicate this prohibition, the court must recognize that leaving the perpetrator (also insane) with the right to drive vehicles or the possibility of obtaining them creates a danger for road traffic. The state of health of an insane perpetrator should prevent them from driving vehicles in a safe manner [26].

A case report

Data on the described case have been anonymized.

Data from the case file

Piotr K. (46 years old) was suspected that he had inadvertently violated the safety rules in land traffic in such a way that while driving a passenger car he was driving at a speed that did not ensure control of the vehicle and he did not control the vehicle, disregarding the conditions in which the traffic took place, he lost control of the steering wheel as a result of which he turned into the opposite lane and then drove onto the sidewalk on which a pedestrian was walking, as a result of which he hit him, causing inadvertent injuries to a pedestrian in the form of a breakdown of the tibia and left fibula, which resulted in a violation of the functions of the body organ lasting longer than 7 days within the meaning of Article 157 § 1 of the Penal Code, i.e., of an act under Article 177 § 1 of the Penal Code.

As a witness, Piotr K. stated that while driving the car he suddenly "lost sight" and did not know what happened next. He woke up in a different place, he was in the car. He did not remember the whole situation involving a pedestrian. "Everything that happened then happened outside of my consciousness." During his studies, he lost consciousness several times and had visits to a neurologist. Later, he was treated by another neurologist who prescribed him anti-epileptic drugs. He claimed that he had never been diagnosed with epilepsy. None of the doctors told him not to drive a car

due to the prescribed medications. When questioned as a suspect, he did not plead guilty. He claimed: "I was not aware that I had hit a pedestrian, I did not know what happened at the time of the accident. This is the first time that I've lost consciousness."

The police note showed that the vehicle driver turned left onto the road for the opposite direction of traffic and then hit a pedestrian, continued driving by hitting the property fence, ran onto it and finished driving. He told policemen that he was undergoing neurological treatment and that he had lost consciousness many times.

The aggrieved party testified that the driver who hit him did not stop and drove on. He rammed several fences. From the testimonies of witnesses it appeared that when they approached the driver, he looked unconscious. It took a few minutes for him to react, and he finally got out of the car on his own.

Medical records

On the basis of the documentation, it is known that Piotr K., at the age of 21, started treatment at the university neurological clinic and continued it for the next 23 years (he finished treatment two years before the accident). During about forty visits, the following were noted: "loss of consciousness incidents", tonic seizures, petit mal, absens, grand mal. Usually, the seizures occurred after a sleepless night, after being nervous; they were accompanied by a post-paroxysmal coma. The interical periods ranged from 1.5 weeks to 1.5 years. The notes read: "treated for epilepsy for many years," "drug-resistant epilepsy."

Five years before the act, Piotr K. visited the emergency room of a clinical hospital due to a grand mal seizure. It was then reported that he had suffered from epilepsy from the age of 16 and was not taking antiepileptic drugs on the day of admission.

A month before the road accident, Piotr K. was brought to the same emergency room from his workplace, where he was found lying at a desk, he had consciousness disorder. He was conscious during the examination, confused at first, but verbal contact was preserved. He was referred to a neurological clinic diagnosed with epilepsy.

All medical records did not contain descriptions of mental disorders or suggestions for their occurrence. Psychiatric or psychological treatment was never recommended.

The ultrasound examinations of the jugular vessels (one month before the accident) and the magnetic resonance imaging of the head with contrast (one week after the accident) did not reveal any pathological changes.

Forensic examination

The patient gave his biographical data in detail: he obtained a higher education, in the past he ran his own business, currently he was an office worker, he was not punished by law, he had a successful family life, he did not abuse alcohol, he was not treated psychiatrically and he did not find any mental disorders, he was not treated for serious, chronic medical conditions. He claimed that he had never been diagnosed

with epilepsy, only once 20 years ago "I felt faint and I passed out." He then had an EEG that did not confirm epilepsy. 10 years ago he visited the neurological clinic and took antiepileptic drugs "prophylactically." Regarding the critical event, he said that that day he was fulfilling his daily duties, he felt well, he had no physical or mental ailments. After work, he did a few errands and then drove home. While driving, I suddenly "lost my memory." He regained his memory while sitting in the driver's seat, he felt dizzy, confused, he did not know where he was. During the examination, Piotr K. presented a balanced mental state.

Neurological opinion

An expert neurologist, appointed at the request of expert psychiatrists and a psychologist, stated that Piotr K. had been suffering from epilepsy with generalized seizures since adolescence, which occurred rarely. Based on the documentation, the expert found that the last confirmed seizure had occurred in the subject one month before the accident. In his opinion, it was almost certain that the cause of the unconsciousness and, consequently, the accident was a seizure.

Conclusions of the opinion of psychiatrists and psychologist

After analyzing all the data, the experts concluded that Piotr K. was neither mentally ill nor mentally retarded, and he did not show symptoms of organic mental disorders. They diagnosed epilepsy. They concluded that due to profound disturbances of consciousness during an epileptic seizure, he was not able to recognize its meaning and direct his actions during the alleged act. The experts noted that Piotr K. had not only adequate knowledge about epilepsy, but also experience concerning epileptic seizures, their course, and their consequences in the mental state and behavior. In their opinion, there were no grounds to state that the subject could not, for psychiatric reasons, predict the occurrence of another epileptic seizure with accompanying disturbances of consciousness. Taking into account the many years of epilepsy and taking into account the attitude presented by Piotr K., which consisted in denying a chronic neurological disease, the experts concluded that there was a high probability that he would commit an act similar to the one accused in the present case. They emphasized that Piotr K. did not show any mental disorders that would justify the application of one or more security measures listed in Article 93a § 1 of the Penal Code. According to the experts, in his case it was justified to apply the penal measure specified in Article 39 points 2–3 of the Penal Code in the form of a driving ban, as well as subjecting him to neurological treatment, which would be supervised in the manner specified by the court. At the same time, the experts noted that this type of therapy was not included in the catalogue of precautionary measures listed in Article 93a § 1 of the Penal Code.

Discussion

The described case illustrates the judicial and procedural difficulties in clinical situations that go beyond those listed in penal codes. While the assessment of the impact of profound disturbances of consciousness on the ability to recognize the meaning of an offense and direct the actions by the perpetrator of the prohibited act does not pose any major difficulties to experts (generally results in insanity) [3], the decisions in the scope of assessing the risk of repeating the offense are unclear and controversial. Pursuant to Article 202 § 5 of the Code of Criminal Procedure, expert psychiatrists (as well as experts indicated by them) are required to express their opinion in the scope of Article 93b of the Penal Code. Experts should, inter alia, assess, within the scope of their competences, the need to apply precautionary measures that would effectively remove the threat posed by an insane perpetrator in the future [21].

If disturbances of consciousness (similar in their image to those in the described case) appeared in the course of other mental disorders or addictions, expert psychiatrists and psychologists, after assessing the probability of repeating the offense, should propose to the court one of the measures listed in Article 93a § 1 of the Penal Code; they would be the most effective protection of the perpetrator against repeating the act. It should be noted that these measures are only applicable to the treatment, therapy, psychotherapy, psychoeducation, and rehabilitation of people with various mental disorders. The purpose of these interactions is to achieve not only an improvement in the mental health of an insane perpetrator, but also in his behavior and social functioning.

In the event that the insane perpetrator does not suffer from chronic mental disorders, the use of the measures indicated in Article 93a § 1 of the Penal Code has no psychiatric and psychological justification, which was pointed out by the experts in the presented case. This also applies to the perpetrators who experienced incidental deep mental disorders on the basis of other somatic diseases. It seems obvious that then one should try to minimize the risk of recurrence of pathological conditions (resulting in insanity), but through the treatment of somatic diseases that are their cause, which, however, is beyond the competence of psychiatrists and a psychologist.

Referring to the analyzed case (no chronic mental disorders), effective treatment aimed at eliminating seizures, which is the domain of neurologists only, plays a key role in the prevention of sudden and deep disturbances of consciousness in the course of epilepsy (which is the basis for recognition of insanity). In the case of other somatic diseases, they would be cardiologists, diabetologists, pulmonologists, oncologists, and other specialists in somatic medicine.

The risk of a prohibited act during a disturbance of consciousness during an epileptic seizure is closely related to the regularity of antiepileptic treatment by the perpetrator [27], proper self-assessment of the patient in terms of seizure occurrence [9], as well as the dynamics and picture of epilepsy, i.e., elements of neurological assessment. One of the most accurate factors predicting another epileptic seizure is the time that has passed since the previous seizure – the longer this period, the lower the risk of

another seizure [13], and thus the lower the probability of committing a prohibited act in a state of disturbed consciousness. Assessment of the effect of antiepileptic drugs on driving performance is essential. Many of them cause side effects that may hinder or even prevent driving: visual disturbances, excessive sensitivity to glare, drowsiness or dizziness [28]. Therefore, any possible comment on precautionary measures requires special knowledge, but in the field of neurology, not psychiatry, or even more psychology.

In the analyzed case, expert psychiatrists, pursuant to Article 202 § 2 of the Code of Criminal Procedure, in order to assess the mental health of the accused requested an additional appointment of an expert neurologist. At the same time, it should be inferred that the obligation contained in § 5 of this article, referring to the need to assess the legitimacy of precautionary measures, does not apply to a neurologist, especially as Article 93b of the Penal Code refers directly to Article 93a of the Penal Code, in which the treatment of somatic diseases is not mentioned. Moreover, it is worth noting that before adjudicating a protective measure, pursuant to Article 354a § 1 of the Code of Criminal Procedure, in cases of insane persons, the court hears only an expert psychologist and expert psychiatrists, which seems justified in the context of the stated insanity, but not with regard to a precautionary measure. The quoted article does not mention a neurologist (or other somatic specialists), the hearing of whom should be considered a priority in the discussed cases.

A solution to this situation would be to divide the competences between expert psychiatrists and a psychologist (assessment of the current state of mental health, sanity, ability to participate in the proceedings) and an expert neurologist (assessment of a precautionary measure). A similar procedure could apply to other clinical situations in which the state of insanity is the result of only somatic disorders (e.g., cardiovascular, diabetic, pulmonary, neurological) and psychiatric treatment is unnecessary.

Different solutions are required in situations in which the perpetrator suffering from epilepsy also suffers from mental dysfunctions which, however, are not directly related to seizures (chronic psychotic, affective and anxiety disorders, personality disorders, and behavioral disorders). If they are confirmed, comprehensive treatment methods should be sought as part of a protective measure [23, 29, 30] and not be limited only to the control of epileptic seizures [31]. It seems that the type and scope of protective measures should then be discussed by a team of experts consisting of a neurologist, psychologist and psychiatrists, which is also not possible under the code at present.

This is where the problem with choosing the right security measure arises. The catalogue of medicinal products does not include one that would be effective in preventing episodic mental disorders caused solely by somatic diseases. It is true that therapy is mentioned there, but nowadays it is equated with treatment at an outpatient clinic of various, broadly understood disorders of the mental sphere. In the case at hand, the experts suggested that the term should also include "neurological treatment that would be supervised as determined by the court." It would be advisable to either

supplement the catalogue of precautionary measures with the possibility of treating various somatic diseases, or to expand the scope of the term "therapy."

In addition to therapeutic preventive measures for an insane perpetrator, including a patient with epilepsy, it is possible to perform the so-called penal measures (Article 99 of the Penal Code). In the discussed case, the driving ban was indicated. Its implementation was aimed at reducing the risk of repeating a prohibited act related to epilepsy. As in the case of medicinal products, also here, pursuant to Article 354a § 1 of the Code of Criminal Procedure, it is not possible to hear the position of the neurologist, which is crucial, before adjudicating this measure.

Similar uncertainties accompany the execution of a criminal measure in the form of a driving ban – it was not specified who would perform periodic assessments of the perpetrator's health condition, which are required by law [26].

In the event of a possible lifting of the driving ban, an expert in neurology was not included in the penal codes, while according to current guidelines on medical examinations of potential drivers [32], only a neurologist should be consulted in the case of epilepsy. His tasks include, among others, confirmation of the absence of epileptic seizures in specific clinical situations (e.g., provoked seizures) as well as determination of the scope of further follow-up examinations. One of the factors supporting the extension of the required seizure-free period is the earlier incidence of a road accident during an epileptic seizure [33], which corresponds to the situation described in this case.

When analyzing opinion-making dilemmas, it is worth focusing on the so-called subjective side of the prohibited act, i.e., the perpetrator's volitional and intellectual relationship to the allegation. In this area, intentionality and inadvertence stand out [34]. There is a view that insanity always excludes intentionality in committing a prohibited act, and therefore an insane perpetrator can only commit his act inadvertently. It is assumed, inter alia, that the perpetrator, having no intention of committing the act, commits it as a result of not maintaining the caution required in the given circumstances, even though the possibility of committing the act was foreseen or could have been foreseen [34, 35]. A different position can be found, saying that an intentional violation of the rules takes place in the case of, inter alia, driving a vehicle under the influence of alcohol, driving without authorization, knowingly and clearly exceeding the speed limit, as well as in the case of awareness of the risk of an epileptic seizure while driving [5]. Therefore, the analysis covers what the perpetrator predicted or possibly what he could have predicted [35]. It is true that these assessments are the sole responsibility of the court, but the procedural authority may consult expert psychiatrists and a psychologist, to a similar extent as in the case of Article 31 § 3 of the Penal Code [36, 37]. In the absence of other comorbid mental disorders, correct intellectual capacity of the perpetrator and documented experience related to the course of the disease and treatment, it seems possible to assume that the perpetrator in the analyzed case could, for example, predict the possibility of an epileptic seizure while driving, and thus predict his state of insanity.

Conclusions

In the event that the causes of the perpetrator's insanity are episodic disturbances of consciousness which occurred solely on the basis of somatic diseases, the use of the measures indicated in Article 93a § 1 of the Penal Code does not find any psychiatric and psychological justification. In such a situation, extending the catalogue of protective measures to include the treatment of various somatic diseases would be worth considering. Pursuant to the current legal regulations, assessments concerning the application of precautionary measures (probability of conducting a prohibited act) against this group of perpetrators are made without the use of experts in the field of somatic medicine, which may cause judicial difficulties.

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