Case Report

A patient with epileptic psychosis who had rare acute episodic symptoms

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1. Introduction

Epileptic psychoses are classified either based on the relationship between psychoses and seizures in terms of time or based on the duration of psychotic symptoms. They are specifically divided into chronic psychoses or multiple types of acute episodic psychoses, which are further divided into postictal and interictal psychoses [1]. The prevalence of epileptic psychoses varies among reports; however, some studies have reported similar findings at a frequency of approximately 5% [1–3]. Symptoms widely vary and may involve not only psychotic symptoms but also anxiety or mood disorders [4]. In this study, we report a patient with rare acute episodic symptoms including a distortion in the sense of time and a symptom wherein the patient feels that “what should be there disappears.”

2. Case report

The patient was a right-handed woman who was 38 years old when she visited our hospital for the first time. Although she experienced febrile convulsion once at the age of 2 years, she had no family history of mental disorders or epilepsy. Regarding her life history, she was born as the second of two children, and she did not show retardation during the fetal, infancy, or school period. After graduating from high school, she was employed as a dental assistant. At present, she lives with her mother.

At the age of 16 years, she developed epilepsy with generalized tonic–clonic seizures (GTCs), and therefore, she began visiting a nearby psychiatrist. During the first several years while taking carbamazepine (CBZ) or valproic acid (VPA), she experienced no seizures. However, she subsequently suffered from complex partial seizures (CPSs) and simple partial seizures (SPSs) several times a week. Her medication dose was adjusted, but the seizures became refractory to treatment. Therefore, she visited our hospital for the first time in October 2004.

As in the case of habitual seizures, SPSs were only epigastric sensations, and they continued for a few minutes and sometimes developed into CPSs. At onset, CPSs involved impaired consciousness with automatism, including ambulatory and groping actions. Complex partial seizures were sometimes followed by falling and unconsciousness, which usually continued for 1–2 min. Moreover, CPSs often occurred independently but sometimes developed into GTCs, thus implying temporal lobe epilepsy (TLE).

After the first medical examination, we adjusted the dose of CBZ and added phenytoin (PHT) as the main antiepileptic agent. In addition, we temporarily administered VPA, acetazolamide, zonisamide, and gabapentin. However, these treatments did not result in any specific improvement in seizures, which continued for several times a week. In

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December 2007, the seizures gradually decreased with the use of topiramate (TPM). Furthermore, in June 2008, she was seizure-free with the intake of 150 mg TPM, 550 mg CBZ, and 150 mg PHT. After being seizure-free for 3 months, she experienced the first mental symptoms as described below. The symptom duration ranged from a few hours to a few days. The seizures then relapsed and occurred several times a month. We assessed the possibility of PHT and TPM causing the symptoms, and therefore, we discontinued their use. However, the symptoms did not disappear, thus leading to the presumption that they were unrelated to antiepileptic agents, at least PHT and TPM. Thereafter, we attempted treatment with lamotrigine (LTG), but it was ineffective. In addition, LTG caused insomnia and dizziness and, therefore, was withdrawn. In May 2010, we coadministered CBZ (550 mg) with gradually increasing doses of clobazam (CLB). At this point, the seizures gradually decreased, and in April 2012, she was seizure-free. At the same time, the mental symptoms disappeared, and the occurrence of her symptoms was 10 times so far.

Regarding the mental symptoms, three types of symptoms were present, with each symptom occurring independently or in simultaneous combinations. One of the symptoms was a distortion in the sense of time, which she described as, “I feel that time is moving slowly, and I can’t wait for the traffic signal to change. The signal seems to not change to green for as long as I am looking at it. I can’t be waiting at the hospital. In contrast, I also feel that time is moving rapidly. The sense of time has slipped.” This symptom was divided into two types in that she felt that time moved too slowly or quickly; the former was more frequent than the latter. In addition, this symptom was most frequent among the three symptoms.

She described the second symptom as, “When watching TV, I feel that the next scene is supposed to be in a particular way.” However, if the scene does not progress in the same way as I imagined, then I feel very anxious.” What she predicted was spontaneous, and she had no intention of specifically predicting something.

Regarding the third symptom, she mentioned “There doesn’t exist a thing where it is actually supposed to be, and there exists another thing where it is not supposed to be. For example, something necessary often disappears when required, but it abruptly appears when I don’t need it. Further, when opening a drawer, there doesn’t exist a thing that is supposed to be in it. However, I feel it’s strange and reopen the drawer to find the thing this time.” In this situation, what disappeared was more often what she took care of than what she unconsciously recognized; however, it was not always consistent. In addition, several objects disappeared, and they were not necessarily the ones that she owned: a bottle on the table, a particular instrument in the drawer, even a telephone pole on the street, etc.

To summarize the characteristics of the three mental symptoms, their onsets and offsets were unclear, and they continued from a few hours to a few days. Moreover, obvious unconsciousness was not detected within and around the symptoms.

3. Examination and diagnosis

In September 2013, we performed magnetoencephalography (MEG) but did not find any specific dipoles. Furthermore, in March 2010, on performing head magnetic resonance imaging (MRI), we did not find any specific organic abnormal findings. We also conducted interictal single-photon emission computed tomography (SPECT) with 123I-lomazenil, which did not identify any specific accumulating change between the early and delayed phases. However, we did find a reduction of blood flow in the right parietal lobe and in the entire left hemisphere in both the early and delayed phases.

Electroencephalography (EEG) findings varied with time. In October 2003, the findings showed sharp- and slow-wave complexes predominantly at the right Fp electrode or the right Fp, F, and aT electrodes. In November 2004, they also showed sharp waves at the right aT, mT, and bilateral Fp electrodes. At the same time, we presumed that the focal lesion was located in the right frontotemporal lobe. Subsequently, in January 2008, when the mental symptoms had not yet emerged, the EEG findings showed spikes at the left Fp and aT electrodes and showed independent spikes at the right pF electrode. After the emergence of the mental symptoms, in November 2013, neither EEG nor 72-h long-term EEG findings revealed any epileptiform abnormalities.

Thus, these findings along with her seizure types led to the diagnosis of TLE. In 1989, the classification of the International League Against Epilepsy referred to TLE as symptomatic localization-related epilepsy. Because the EEG findings were inconsistent in the present study, the focus remained undetermined.

4. Discussion

In the present work, we report a patient with TLE who showed rare mental symptoms. We generally investigated the characteristics of these symptoms; in addition, we discussed each symptom in detail while citing previous research.

We have listed the characteristics of the mental symptoms that first emerged when the patient’s epilepsy began 26 years ago. The symptom duration ranged from a few hours to a few days, and we could not clearly identify their onsets or offsets; the symptoms did not follow specific unconsciousness. According to these characteristics, we should judge the phenomena not by the seizures but by the mental symptoms, although we could not perform an EEG during the emergence of the symptoms.

The relationship between the seizures and the mental symptoms was unclear. For example, in the first 3 months, each mental symptom followed seizures. However, subsequently, the mental symptoms emerged a few days after a series of GTCs, or by contrast, they could be followed by a series of GTCs. Therefore, we could consider these mental symptoms as acute episodic psychosis but not as subtypes, such as postictal or interictal psychoses.

A distortion in the sense of time has been previously reported by Mullan and Penfield [5]. However, no recent reports are available on it in the English literature, while a few reports are available in the Japanese literature. Regarding psychic seizures, several Japanese studies have reported that “the focus was often found in the frontotemporal lobe in EEG if there are any foci,” “the type of seizures and interictal EEG imply the TLE [6],” and “a rapid type of distortion in time sense is followed by epileptic discharge, involving mesial temporal structures.” Furthermore, regarding an additional mental symptom, a case report of a patient with postictal psychosis is available [7]. In this case report, the authors showed that the patient recognized a distortion in the sense of time, which was followed by a dreamy state, depersonalization, and icctal fear for 2 days after a series of seizures. In our case report, we diagnosed the patient with TLE and observed several similarities with findings of previous reports. The EEG findings varied, but foci were presumed to be in the left or in the right frontotemporal lobe during a certain period; no specific contradictions were observed.

Regarding the symptom described as “the next scene is supposed to be in a particular way,” we assessed it as a symptom similar to déjà vu because we believed that the patient felt she had known in advance what would soon happen. It could be a type of familiarity impairment.

Regarding the symptom described as “what should be there disappears,” we anticipated that the symptom was related to jamais vu or a dreamy state. Therefore, we asked her to discuss this in detail; however, she clearly denied the relationship. We assessed that the symptom meant that although something actually existed, she could not recognize it, rather than the symptom being due to a change in familiarity. Therefore, the symptom should not be considered as jamais vu. We report this symptom as a new finding because we could not retrieve any similar reports during a literature search.

We report that the patient had several symptoms that are difficult to symptomatologically formulate, such as “a distortion in the sense of time,” “the next scene is supposed to be in a particular way,” and
“what should be there disappears.” Although little research is available on the mental symptoms of patients with epilepsy, it is necessary to study this further from several aspects.

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Conflict of interest

The authors have no conflict of interest to disclose.

References

[1] Kanemoto K, Tadokoro Y, Oshima T. Psychotic illness in patients with epilepsy. Ther Adv Neurol Disord 2012;5(6):321–34.

[2] Kanemoto K, Tsuji T, Kawasaki J. Reexamination of interictal psychoses based on DSM IV psychosis classification and international epilepsy classification. Epilepsia 2001; 42(1):98–103.

[3] Alper K, Devinsky O, Westbrook I, Luciano D, Pacia S, Perrine K, et al. Premorbid psychiatric risk factors for postictal psychosis. J Neuropsychiatry Clin Neurosci 2002; 14(4):405 [author reply 405–6].

[4] Blumer D, Wakhlu S, Montouris G, Wyler AR. Treatment of the interictal psychoses. J Clin Psychiatry 2000;61(2):110–22.

[5] Mullan S, Penfield W. Illusions of comparative interpretation and emotion. Neurology 1959;81:269–84.

[6] Kawai I, Kawagoe T, Hatada K, Ohashi H. Ictal distortion of time sense in epileptic patients. J Jpn Epilepsy Soc 1983;1:17–22 [article in Japanese].

[7] Okazaki M, Kato M, Ito M, Watanabe M, Nakama H, Kaido T, et al. Two kinds of seizure-related psychotic episodes in one patient: relation between psychic aura and postictal psychosis. J Jpn Epilepsy Soc 2008;25:441–9 [article in Japanese].