Psychotic Episode in Epilepsy

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INTRODUCTION

In epileptics, intellectual disturbances and character changes develop due to organic impairment of the brain causative of epileptic fits, and to organic impairment arising from frequent seizures. Psychoses or a psychotic state may also appear at times.

Such psychotic states are often treated as "epileptische Dauerpsychose" by psychiatrists. However, where it appears in an acute or episodic way, it has rarely attracted attention as strictly interpreted psychosis, because the symptoms present themselves transiently and reversibly. Cases in which the focus is in the frontal region of the temporal lobe are apt to present a state of schizophrenic delusion (Donigier[1]), while temporal lobe epilepsy is reported to present a depressive state, or schizophrenic state, or a mixture of the two, that is, a nonspecific picture (Gastaut et al.[2]).

Since the development of such a psychotic state is uncorrelated with either the duration of the epileptic condition or brain injury (Flor-Henry [3]), it is difficult to determine the position that epileptic psychosis holds in the entire picture of epilepsy.

Furthermore, this is giving rise to confusion in the concept of epileptic psychosis itself.

CASE REPORT

The patient is 29 years of age, right-handed, female, unmarried, and a company employee.

Past history: Not remarkable except for this disease.

Family history: She is the youngest child of eight children, and one of her elder sisters was once seen in this department for treatment of a simple type schizophrenia. Her parents are second cousins.

Past history: Although she was born in an asphyxial state, her mental and physical growth during infancy was normal. From age 12, however

she would become absent-minded for several seconds while eating, or would not respond when spoken to. Such episodes were observed about once a month.

At age 14, she was taken to this department for medical examination. Her EEG revealed a typical 3 c/s spike and wave complex. She was diagnosed as having "petit mal epilepsy", and was administered anticonvulsants. The symptoms improved following drug administration, and after two years she stopped taking the drugs without consulting her doctor.

Up until her graduation from college, she had similar attacks about once a year, but received no medical treatment. She graduated with excellent grades from the department of economics, and was employed as a secretary at a large commercial enterprise. Up to the age of 28, she was considered a very able employee.

Subsequently however, she occasionally complained that her coworkers were speaking ill of her. Her ablity to concentrate declined, and her ability to execute clerical work also dropped. She would leave her place of work without permission to walk for 1 or 2 hours around the company compound with no specific purpose, or would smile absent mindedly while talking with her superior.

On one occasion she bought several dresses and stowed them away in her wardrobe without ever wearing one. When members of her family reminded her of her wastefulness, she replied, "My future husband is somewhere in this world. I feel telepathic thoughts from him".

Between such episodes, particularly odd behavior was not observed, but her personality became unscrupulous and less considerate of others, and her speech became childish in manner.

She also showed a noticable increase in her consumption of fruits and cakes during her epileptic episodes.

The following incident led to her admission to this hospital.

One of her male colleagues was to marry in one month. When she found out, she told her superior that, "I got married with him in the spiritual world. Our marriage life has been continuing up to today through telepathy. I'm his wife. If he gets married with another women this time, he will be guilty of bigamy. I want you to dissuade him from getting married". This odd speech and behavior lasted half a day and then disappeared, but her consciousness was clear during that period.

Asked about this episode by a physician during her medical examination, she just smiled wryly and said, "I had a friendly feeling toward

him, so maybe I said something odd in a fit of rage".

She was in the hospital for four months, during which time various tests were performed, and observations were made on her clinical course. Results of tests: Any abnormal neurological findings were not observed. Scout film examination of the brain, pneumoencephalogram, brain scintigram and the left CAG revealed no evidence of abnormalities, and results of the cerebrospinal fluid test was normal.

When no significant psychiatric findings were uncovered, an EEG was taken which revealed high voltage slow burst dominant in both fronto-central areas, with spike and wave complex, as well as a small spike pattern dominant in the left hemisphere triggered by hyperventilation.

During her admission, she would laugh uproariously over trifles, or say, "A man who loves me is in Tokyo. He will show up before me someday and pr;pose marriage to me". This state lasted several days, and the EEG taken at the time showed no evidence of abnormalities.

Tests on the peripheral blood and hepato-renal function were negative. Blood sugar was around 80mg/dl when measured either during or between episodes. Blood ammonia, serum iron and serum copper were normal.

Results of PBI, T_3 and T_4 resin test and measurment of catecholamine were not remarkable.

WAIS (Wechsler adult intelligence scale) showed a verbal test IQ of 99, and a performance test IQ of 91, which were lower than expected considering her employment.

The ink blot test showed that she has a tendency to escape into an imaginary world while having a strong desire to contact others. She showed reactions suggesting both a strong desire for, and a powerful anxiety toward sexual contact when saw cards representing male authority. She is in an ambivalent state of fear and desire for male contact.

To a strong emotional stimulus, she showed a strong unrest and confusion. She is emotionally immature. Immaturity, undifferentiated dependence, and her desire for contact suggest a strong desire for love. Course . fter admission: Following oral administration of carbamazepin, 600mg/day, and cloxazolam, 6mg/day, she had episodes similar to those mentioned above only once during her 4 month admission. Although she appears to be doing well, her egocentric and selfish behavior does not improve, but worsens very slowly.

At present, she is working but it is no longer possible for her to do

any work involving heavy responsibility.

DISCUSSION

If importance is attached to the clinical course from infancy, and the patient's EEG findings, this case is undoubtedly a disease within the range of epilepsy. Her birth in an asphyxial state, and frequent short duration losses of consciousness since childhood are grounds to back up the foregoing view. Furthermore, the manner in which her frequent episodes appear also indicates her condition to be within the range of epilepsy.

However, the progressive changes in personality, delusions of persecution, "Liebeswahn", inferences of thought, and "gemachtes Erlebnis" are not symptoms peculiar to epileptic psychosis, but to those of schizophrenia.

In persons with certain personality deviations, in particular, being to personal relations, there is a tendency toward delusions of reference, delusions of observation, delusions of persecution and "Liebeswahn" developing when they are compelled to be in difficult personal, or social circumstances with no relief over a long period.

From the viewpoint of the clinical psychologist, the pathological picture in this case is hardly distinguishable from the paranoia or schizophrenic paranoid. This disease group is well known as "sensitiver Beziehungswahn" (Kretschmer[4]).

Kretschmer held that unlike the paranoid type of schizophrenia or paranoia, this is not an incurable psychosis, and can be cured step by step if the physician approches the psychological world of the patients with a psychotherapeutic attitude. In this patient, the development of delusions is somewhat understandable. Yet, sophisticated emotions such as shyness and modesty are dulled. Such a course of personality breakdown cannot be explained through the patient's experiences or environment.

A state showing similar personality breakdown characteristics of schizophrenia and periodicity, and characteristics of affective disorders concurrently, was classified as atypical psychosis by Leonhard[5]. According to his theory, this disease develops suddenly and follows a course showing phase characteristics and periodicity. The prognosis is relativly good with no residual mental defect, and the pathological picture is predominated by the disturbance of consciousness, emotion and psychomotor. A diverse schizophrenic picture is presented, but hallucinations are mostly sensory, while delusions are floating and nonsystematic. As

for the premorbid character, the patients are sensitive, methodical and obstinate, unlike the autistic personality in typical schizophrenics, and mental, and/or physical turning points triggering off this disease are found in many cases.

In the hereditary study of atypical pyschoses, Mitsuda[6] claimed the independence of this disease, that is, a view negating the mixed type of schizophrenia and affective psychoses.

Sawa[7] mentioned the existence of schizophrenia, affective disorder and epileptic factors in the patient's family history as the characterics of atypical psychoses.

Although the patients elder sister has diagnosed as being schizophrenic, with symptoms such as unsociability, nervousness and listlessness, and as a res lt is unemployed and unmarried, she does not experience hallucinations or delusions. Her condition appears considerably differnt from that of this patient, and while there may be a genetic load, with that alone, a hasty conclusion cannot be drawn that this patient is a schizophrenic.

When the diagnostic criteria advocated by Leonhard[5] is applied to this case, questions are raised in terms of the phase characteristics and periodicity. To be sure, the patient shows an episodic type of attack, but the duration of episodes is by no means long.

As to the clinical course, her condition does not improve, and the disease is slowly advancing.

There is something systematic about the substance of her delusions, but her hallucinations expressed as telepathy, inspiration and electricity, take a somewhat ambiguous form.

Slight apathy and personality disturbance persist, and these symptoms are progressive. In the meantime, delusion and hallucinatory symptoms appear frequently in an episodic manner. Definite disturbances of consciousness are not observed during these episodes, so it is impossible to assert that they are stemming from epilepsy.

However, patients with this disease often take fruits and sweets excessively during their episodes. This calls to mind the abnormality in metabolism of carbohydrates in oneirophrenia advocated by Meduna et al.[8] However, the biochemical finding claimed by them is not confirmed by other researchers, and we were also not able to confirm it.

Nor could we observe multiple scenic hallucinations and oneiroid states which are characteristics of oneirophrenia.

As to psychiatric symptoms which appear antagonistic to epileptic

fits, mention can be made of the schizophrenic state, and rare as it is, the manic-depressive state may also appear.

In the schizophrenic state, as the psychotic episode in epilepsy, the consciousness is clear, unlike the dreamy state, and symptoms are observed such as impairment of affective rapport, narrowing in the range of thought, delusional ideas, auditory hallucinations, persistent excitement, unrest, tachyphasia and hyperkinesia.

It is natural that the hebephrenic type, paranoid type or catatonia-like state should appear by the combination of symptoms mentioned above. This psychotic episode in epilepsy is said to last from several hours to several days. Also, it shifts to the persistent psychotic state in some cases, though very small in number (Mori[9]).

In the manic-depressive state, as a psychotic episode in epilepsy, the epileptic character appearing on the foreground is substantially different in nuance from endogenous affective disorders (Donigier[1]).

When these psychiatric symptoms are observed, EEG reveals a decrease or disappearance of paroxysm and dysrhythmia and the appearance of alpha rhythms. When the psychiatric symptoms are not observed, changes in EEG are rather remarkable and paroxysm appears. Such paradoxical changes in the EEG treated as "forced normalisation" (Landolt[10]). This phenomenon is considered to be due to an excessive intake of anti-epileptic drugs, or as a kind of overresponse of the entire brain to its functional disturbance.

As described earlier, in the present case the focus is in the left hemisphere, and attacks of the petit mal type have occurred in childhood Episodic schizophrenic has appeared, but physical attacks have disappeared upon maturation as an adult. In deciding whether this case should considered a psychotic episode in epilepsy, or a combination of epilepsy and schizophrenia, personality breakdown different from the epileptic changes progressing even during the no-attack period, must be considered. Therefore, future observations on the clinical course will be aff the more important.

SUMMARY

At age 14, the patient was diagnosed as having petit mal epilepsy; with the treatment administered, and the clinical attacks were largely brought under control.

From age 29, she started showing odd behavior which lasted about half-a-day approximately once a month.

With modesty gone and spirit elated, she would squander and show impudent actions.

Besides these disturbances in the aspect of emotion and will, she sometimes showed pathological experiences such as "Liebeswahn" and delusions of persecution.

Her consciousness was clear during these episodes.

In the meantime, however symptoms suggestive of schizophrenia, such as apathy and personality breakdown were progressing.

EEG taken during the episodes showed no evidence of abnormal findings, but EEG between episodes revealed appearance of high voltage slow burst in both fronto-central areas followed by the appearance of small spike patterns dominantly in the left hemisphere.

Judging from the clinical conrse described above, and the results of examinations, this is , onsidered a case akin to psychotic episodes in epilepsy.

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