Case Report

EARLY ONSET SCHIZOPHRENIA WITH AN UNDERLYING EPILEPTIFORM DISORDER- A CASE REPORT

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ABSTRACT

We report the case of a 15 year old girl presenting with negative symptoms of schizophrenia, with an underlying epileptiform disorder that was masked. Though many cases of epilepsy who subsequently develop a psychotic disorder have been well documented, only a few cases of primary psychotic disorder with epilepsy have been described. This case report highlights the overlap between both these disorders and the need for a clinician to be cognizant of both.

Keywords: schizophrenia, early onset, epileptiform disorder

INTRODUCTION

Schizophrenia is one of the most disabling and economically catastrophic medical disorders, with prevalence approaching one percent internationally. The incidence is about 1.5 per 10,000 people.[1] Gibbs et al. in the 1950s reported an increased frequency of interictal psychoses in patients with complex partial seizures. They also suggested that schizophrenia and epilepsy might share some common medial temporal lobe pathology.[2] Getz et al. studied the positive and negative symptoms of schizophrenia in patients with temporal lobe epilepsy. Negative symptoms were significantly more prevalent than positive symptoms. Negative symptoms were independent of the presence or absence of depression. They had greater cerebral atrophy and neuropsychological deficits exceeding the general cognitive morbidity associated with temporal lobe epilepsy.[3] However, there are lesser reports of negative schizophrenia with generalized epileptiform abnormalities in EEG, with no clinical history of seizures. Here we are reporting a 15 year old girl with negative symptoms of schizophrenia with an underlying epileptiform disorder.

CASE REPORT

Herein, we present the case of Ms A, a 15 year old girl from Kerala. She is the second child of a non-consanguineous marriage. Antenatal history was uneventful, and there were no postnatal complications. She was born by full-term caesarean section and was of normal birth weight. Developmental milestones were attained appropriate to age.

There was a family history of psychotic illness in the paternal grandmother in the form of talking to self and auditory hallucinations, for which no treatment has been done. No history of significant medical illness was reported in the family.

The patient, who had always kept herself aloof and detached, was noticed to be getting increasingly fearful

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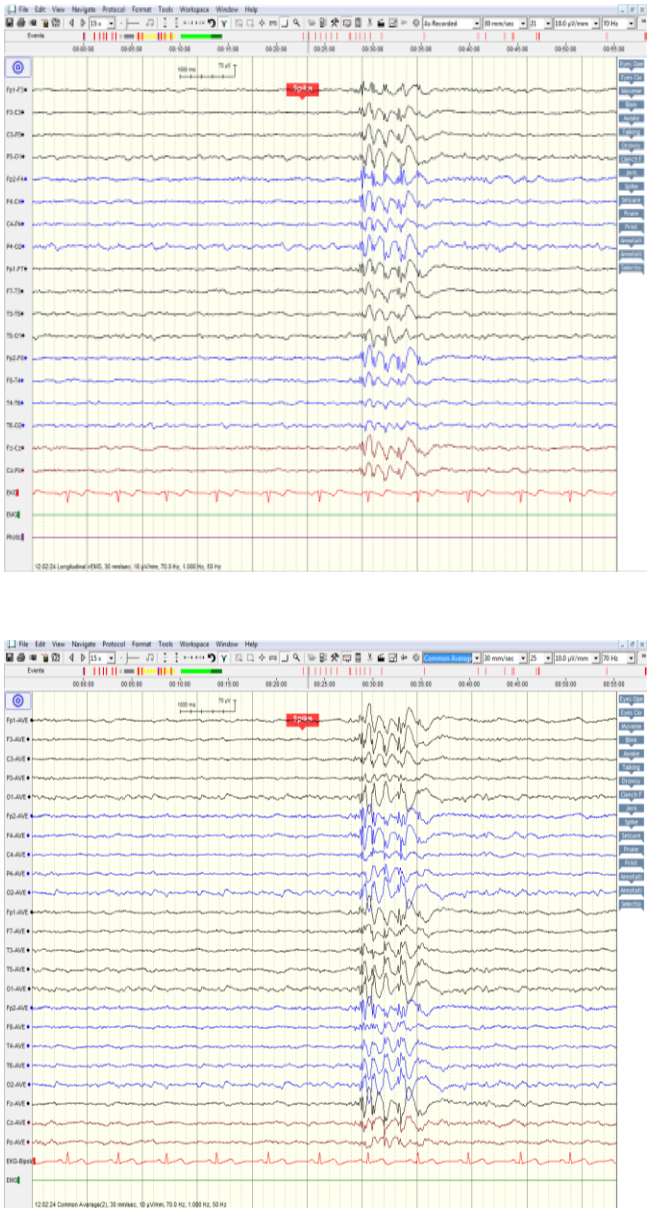
and even more withdrawn from 13 years of age. She spent most of her time inside her room and stopped going to school. She was seen to be occasionally smiling to herself. The mother also noticed smacking movements of lips occasionally.

She was started on Risperidone-2 mg by the psychiatrist a few days after noticing the symptoms. It was continued for three months. Though smiling to self resolved, other symptoms persisted. Owing to the smacking movements of her lips, she was referred to a tertiary care centre for expert management. F

Figure 1. EEG Recording: Frontally dominant generalized spike and wave discharge.



All neurological evaluations done in 2019, including EEG, MRI brain, antinuclear antibody, immunofluorescence, CSF study Serum Ceruloplasmin were within normal limits. But, decreased interactions, slowness of movements, fearfulness and social withdrawal persisted. Hence, she was referred to a psychiatrist. She took a trial of Olanzapine for six weeks. Later, she was started on Clozapine due to a lack of response. The patient developed sinus tachycardia on Clozapine, and it was withdrawn. Soon, her parents decided to stop all the drugs and pursue magico-religious procedures. Hence, the child was discharged against medical advice.

She was brought back to the hospital two years later due to the intervention of local health workers. Parents report that the symptoms remained more or less the same in these two years. The child dropped out of school due to the illness and had almost no social interactions. She would speak sparingly and would never step out of her room. Her vegetative functions were reported to be normal. Self-care, including hygiene during menstrual cycles, was poor.

A mental status examination revealed a conscious girl who did not respond to questions and commands or make eye contact. She would interact only with her mother, which was also limited to a few words. She was out of touch with the surroundings, and rapport could not be established. All her movements were slow. Occasionally, she was seen making smacking movements with her lips, lasting for a few minutes. Thought disorders and Perceptual abnormalities could not be elicited. There were no tonic-clonic movements of limbs. There were no tics or stereotyped movements. There were no posturing/automatic obedience /negativism/other catatonic features.

Clinician Rated Dimensions of Psychosis Symptoms Severity scale (Reference: DSM 5) was done, and the score was 9. The positive And Negative Syndrome Scale score was 78 (P-8, N-31, G-38). There was 60 percent disability according to Indian Disability Evaluation and Assessment Scale. Hence, according to DSM-5, a diagnosis of unspecified schizophrenia spectrum and other psychotic disorders was made since the patient did not meet the full criteria for disorders in the schizophrenia spectrum but had prominent negative symptoms (diminished emotional expression, avolition, alogia, asociality).

The patient was initially given Amisulpiride- 50mg, which was up titrated to 200 mg over a week. Memantine 5 mg was given, later increased to 15 mg per day. A consultation was sent to the Neurologist. EEG showed frequent epileptiform abnormalities in wakefulness with Mayo Clinic classification of Dys III Generalized spike and wave discharges (shown in images 1, 2). CSF was tested for anti NMDA antibodies and found to be negative. Sodium valproate- 200 mg BD was started, and the patient had good clinical improvement. Antipsychotics were continued at the same dose and were planned for tapering at a later follow up.

The patient's guardian provided consent for the publication of case details.

DISCUSSION

The link between psychotic symptoms and epilepsy has always been a topic of interest among Neurologists and psychiatrists for a long time. Kraepelin has recorded his observation of seizure disorder in 'dementia praecox'.[4] The literature on the association of psychotic symptoms and epilepsy mostly reports cases with psychotic symptoms occurring after the onset of epilepsy.

The rates of psychotic symptoms in epilepsy have been found to be variable, depending on the definitions given. For unclassified psychoses, the prevalence is 7% to 25% in patients with complex partial seizures and 2.4 to 9.4 percent when both complex partial and generalized seizures are taken into account.[5] A study conducted in 2004 showed the prevalence of schizophrenia among patients with epilepsy to be 9 to 52 percent.[6] A follow-up study of 87 children with temporal lobe epilepsy showed that 10 percent developed schizophreniform symptoms in 10 years of follow up.[7] Clinical studies indicate that patients with epilepsy who develop psychotic symptoms may be a heterogeneous group of subjects, with the majority of them showing positive symptoms. A subset with predominantly negative symptoms also exists.[5] Psychotic symptoms usually follow epilepsy after a decade.[5] The prevalence of psychotic symptoms in patients with epilepsy increased with the increasing number of hospital admissions and later age of onset.[8] Compared to nonpsychotic epilepsy, patients with epilepsy and psychosis have more ventricular enlargement, periventricular gliosis and greater brain damage.[5]

In the case discussed here, the features indicate the negative symptoms of schizophrenia associated with generalized epilepsy. Since the symptoms were present throughout the course of illness and were not confined to discrete episodes, the possibility of these symptoms being an ictal phenomenon can be ruled out. Due to the lack of family history or past history of seizure disorder and the neurological workup done at the beginning of the illness being normal, this can be considered a case of primary psychotic illness with an underlying seizure disorder that was masked. The family history of psychotic illness in this patient strengthens this assumption. The patient had much clinical improvement after Valproate was added to the regime. The possibility of lip-smacking, behavioural issues and academic decline being a part of psychomotor seizures was considered. However, the continuous nature of these symptoms is against that of primary generalized epilepsy, which usually has very less seizure frequency (as the patient had generalized epileptiform abnormalities in EEG). Hence, these symptoms can be considered to be a part of primary psychiatric illness. conse

Though there have been numerous studies and case reports regarding the occurrence of psychosis in relation to an ictal event, there is less clarity regarding the occurrence of epilepsy in a psychotic disorder. Only a few studies have been conducted in this regard, and no firm conclusion has been drawn. However, from the existing literature, clinical, epidemiological, neuropathological, and neuroimaging features of both these diseases can be found to overlap a great deal.[5] There is mounting evidence that schizophrenia is a disease of neuronal migration, which can also lead to an increased risk of seizures.[9]

Knowledge about one may indeed be the key to deciphering the finer aspects of the other. Further, cases like that of Ms A, where boundaries of neurology and psychiatry blur, can be challenging for a clinician and highlight the importance of being cognizant of the shared roots of these diseases.

CONCLUSION

Epilepsy and psychiatric disorders overlap to a great extent epidemiologically, clinically and neurobiologically. There needs to be more research into

this. This case report highlights the importance of remaining alert about the shared roots of both these diseases.

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