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Acute and transient psychotic disorder as a rare early manifestation of late-onset sub-acute sclerosing panencephalitis

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ABSTRACT

Subacute Sclerosing Panencephalitis (SSPE) is a rare, late complication of measles infection. Illness generally starts with intellectual dysfunction, personality changes, myoclonus and epileptic seizures but rarely, initial presentations may only have psychiatric symptoms. We report a case of late-onset SSPE, presenting with symptoms of acute and transient psychotic disorder in the absence of classical symptoms of SSPE.

1. Introduction

Subacute sclerosing panencephalitis (SSPE) is a rare progressive neurological complication of measles with high fatality (Parmar, Ranjan, & Sagar, 2017). It is a late complication of measles infections. Most commonly it is seen in age group of 4–15 years, but rarely, it is also reported in adults (Schönberger, Ludwig, Wildner, & Weissbrich, 2013). The symptoms of SSPE usually develop 4–10 years following measles infection, however the latency period may be up to three decades as reported in literature (Schönberger et al., 2013). Illness generally starts with progressive intellectual deterioration, personality changes, myoclonus, ataxia, epileptic seizures and visual disturbances (Javali, Menon, & Chakor, 2014). The presentation varies according to the age of the patient, and sometimes the diagnosis is delayed in adults due to the atypical presentation like psychosis, catatonia, mania or depression. Only a few cases have been reported in literature in which psychosis or catatonia was the presenting complaints (Dayal & Balhara, 2014). In SSPE, there occurs extensive destruction of neurons, which is possibly immune mediated; however the exact mechanism remains unclear (Schönberger et al., 2013). With the disease progression, generally advancement of disease occur from cerebral cortex to brainstem, but exclusive cortical or brainstem involvement as well as advancement of the disease in a different way (brain stem to cerebral cortex) are also possible (Upadhyayula, Yang, Yue, & Ciacci, 2017). Variation in involvement of brain areas might be responsible for diversity of clinical presentation in SSPE. We report the case of an adult with SSPE, who presented initially with symptoms of psychosis and, consequently, was misdiagnosed as a case of Acute and Transient Psychotic Disorder.

2. Case history

A 26 year-old young adult belonging to rural area with no past or family history of psychiatric illness and history of inadequate immunization coverage during childhood presented to a tertiary care hospital in North India with an illness of 2 months duration. His illness started with withdrawn behavior, muttering to self and inappropriate smiling, reduced self-care, impaired sleep and disorganized behaviour. He was taken to a district hospital initially and was started on olanzapine (15 mg/day) which led to improvement in his psychotic symptoms but he developed severe extrapyramidal side effects (parkinsonian symptoms) with olanzapine. The dose of olanzapine was reduced to 5 mg/day in his subsequent visit, however the parkinsonian symptoms persisted. At the time of consultation in our center, the patient had severe parkinsonian symptoms as well as poor oral intake. Olanzapine was stopped and anticholinergic medication (Promethazine 50 mg intravenous injection followed by oral trihexyphenidyl 4 mg/day) was prescribed for treatment of extrapyramidal symptoms. Within the next week, the extrapyramidal side effects reduced significantly but his family members reported development of myoclonic jerks, inability to walk, inability to speak and weakness in right upper and lower limbs. At this point, the patient was hospitalized. Over the next one week, his bladder control deteriorated. The patient had never used any psychoactive substance and pre-morbidly, he was well adjusted to life.

All routine haematological investigations (routine hemogram, Liver function, Kidney function and electrolytes) of the patient were within normal limits.

The patient was transferred to the neurology unit. Electroencephalogram (EEG) revealed periodic complexes (Fig. 1). Computed Tomographic (CT) scan of the brain shown hypodense lesion

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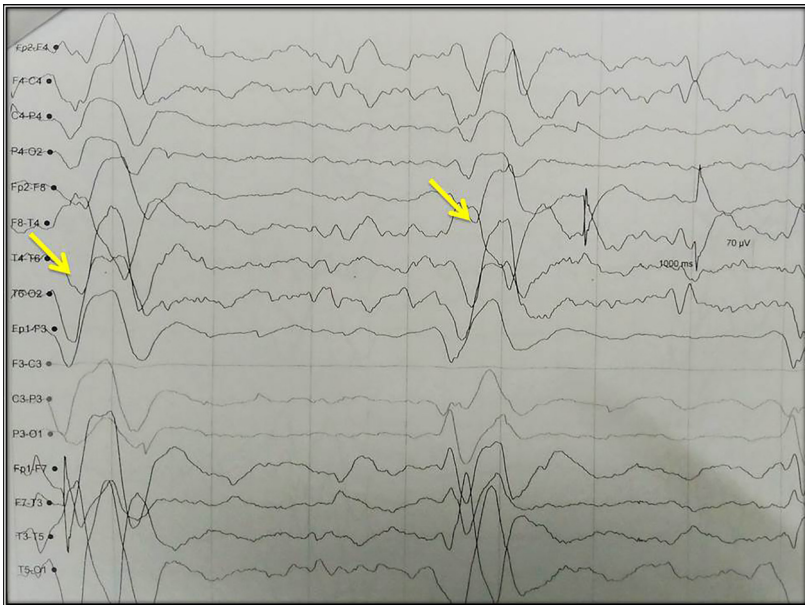

Fig. 1. EEG showing periodic complexes.

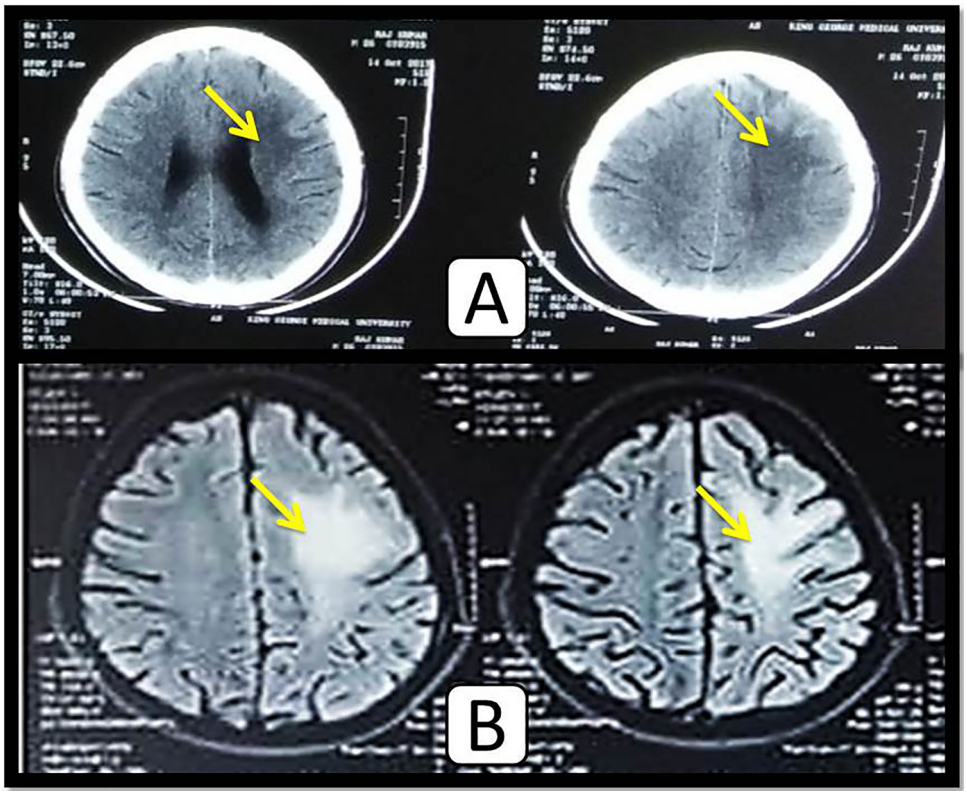

Fig. 2. CT scan of brain showing hypodense lesion in the left fronto-parietal region (2A) and MRI of the brain showing white matter hyperintensity in the periventricular area on the diffusion weighted images over left fronto-parietal region (2B).

in the left fronto-parietal region (Fig. 2A). Magnetic Resonance Imaging of Brain revealed white matter hyperintensity in the periventricular area on the diffusion weighted images (DWI) over left fronto-parietal region (Fig. 2B). His serum & cerebrospinal fluid (CSF) IgG antibody for Measles virus were positive. He was diagnosed with SSPE. He was started with intrathecal interferon regimen on weekly basis. There was partial improvement in his symptoms over next two weeks.

3. Discussion

Our patient initially presented with psychiatric manifestations suggestive of acute and transient psychotic disorder followed by classical symptoms of SSPE. The case was misdiagnosed as acute and transient psychotic disorder, due to absence of obvious clinical signs or symptoms that indicate an underlying organic brain disorder.

Clinical suspicion of organic brain disorder aroused upon observing severe extrapyramidal side effects with olanzapine, which persisted