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A CASE SERIES OF NEUROPSYCHIATRIC MANIFESTATIONS IN SYSTEMIC LUPUS ERYTHEMATOSUS: FOUR DISTINCT PRESENTATIONS

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ABSTRACT

Background: Systemic Lupus Erythematosus is a chronic, systemic autoimmune disease affecting multiple organ systems, which also involves nervous system. Neuropsychiatric syndromes were estimated to exist in more than half of SLE patients. **The Cases:** We present a series of four cases, seen by our psychiatry consultation service over last 3 years period, where all 4 of them had been diagnosed with neuropsychiatric systemic lupus erythematosus (NPSLE) but has distinct clinical presentations. They were successfully managed by pharmacological therapy and behavioural therapies. **Conclusion:** Neuropsychiatric manifestations of SLE are not uncommon yet often underdiagnosed. These worsen the prognosis and quality of life of SLE patients. Hence, we advocate for further research on NPSLE and all physicians to be aware about them, to improve the outcome of the patients.

INTRODUCTION:

Systemic Lupus Erythematosus is a chronic, systemic autoimmune disease affecting multiple organ systems and involves the nervous system. Neuropsychiatric syndromes were estimated to exist in more than half of SLE patients [1]. However, the neuropsychiatric aspects of the disease have been less studied than the peripheral aspects. Although the survival and prognosis of SLE have improved substantially in recent decades, neuropsychiatric lupus (NPSLE) continues to provide significant morbidity and mortality, only surpassed by lupus nephritis.[2] In 1999, the American College of Rheumatology defined 19 neuropsychiatric manifestations of SLE (Table no:1). Similarly, Systemic Lupus Collaborating Clinics includes 5 neuropsychiatric symptoms in its 2012 revised SLE criteria: psychosis, mononeuritis multiplex, myelitis, neuropathy and acute confusional state.[5] Neuropsychiatric events may precede, occur concomitantly or follow the diagnosis of SLE. There are no conclusive studies regarding the pathophysiology of NPSLE. However, there is evidence of microvascular injury and auto immune central nervous system lesion, as like complement mediated response and nuclear antibodies as anti-DNA anti ribosomal P. Timely recognition and management of neuropsychiatric comorbidities in SLE patients is important as these neuropsychiatric manifestations can negatively impact the prognosis and also the quality of life in patients with SLE. We are presenting a case series which comprises of 4 cases with distinct neuropsychiatric manifestations of SLE.

Table No 1: Neuropsychiatric Syndromes Observed In Systemic Lupus Erythematosus[4]

CENTAL NERVOUS SYSTEM	PERIPHERAL NERVOUS SYSTEM
Aseptic meningitis	Acute inflammatory polyradiculoneuropathy (Guillain-Barre Syndrome)
Cerebrovascular disease	Autonomic disorder
Demyelinating syndrome	Mononeuropathy, single/multiplex
Headache (including migraine and benign intracranial hypertension)	Myasthenia gravis
Movement disorder (chorea)	Neuropathy, cranial
Myelopathy	Plexopathy
Seizure disorder	polyneuropathy
Acute confusional state	
Anxiety disorder	
Cognitive dysfunction	
Mood disorder	
Psychosis	

The Cases:

Case No 1

A 26 years old female from rural background, married and homemaker without any past and family history of psychiatric illness got diagnosed with SLE one year ago, and was off medications for last two months. She was brought to our psychiatry OPD as she had been talking irrelevant for last fifteen days, she was suspicious that people in her locality were trying to harm her, and for that she was staying fearful and was abusing the neighbors. She was also hearing voices talking ill about her among themselves and often found muttering to self. She was sleeping very less and showing odd behaviors. On examination she was found to have delusion of persecution towards neighbors, auditory hallucination, irritable affect, grade 1 insight. The Brief Psychiatric Rating Scale (BPRS) score was 62. All the routine blood examinations were within normal range except for the liver function test which was mildly deranged. NCCT brain was normal. A diagnosis of lupus psychosis was made and was successfully managed with tablet Olanzapine upto 15 mg along with proper treatment for SLE. Over next 2 weeks her symptoms reduced significantly and she was maintaining well with regular medication.

Case No- 2

A 27 years old female married from urban area was on regular treatment for SLE for last four years. But her symptoms were deteriorating for last four months and was having severe skin lesions and pain and swelling in multiple joints making her non ambulatory. She had no past and family history of psychiatric illness and no history of substance use with a well-adjusted pre-morbid personality. For the past two months she was feeling sad, was worrying about the future of her family and children, she was not interacting with others much, lost interest in previously pleasurable activities, her sleep was severely disturbed, and she was spontaneously crying at times. She was hopeless about future, feeling helpless and guilty about not being able to take care of her family. She had sable vitals and on mental status examination she had sad affect, with severe guilt feeling, death wishes, poor self-esteem and negative cognitions about the future and her health. Her routine blood investigations showed mild anemia, with deranged lifer function tests. A diagnosis of depressive disorder severe, without psychotic symptoms was made, The Hamilton Rating Scale for Depression (HAM-D) showed severe degree of depression. She was started with tablet Escitalopram 10 mg which was gradually increased to 20 mg along with CBT sessions. She attained remission in next two months.

Case No- 3

A sixteen years old boy from rural background was diagnosed as SLE with autoimmune hepatitis five months ago and was off medication for twenty days. He got admitted in the medicine ward of Agartala government medical college with history of one episode of GTCS followed by generalized weakness. On second day of his hospital stay, he developed rigidity of the whole body and a psychiatric call was initiated. On examination his vitals were stable, but he was in stuporous condition, had mutism, vacant stare, rigidity was present in both upper and lower limbs, waxy flexibility and negativism were present. Routine blood investigations were normal except for deranged Liver function test. CECT brain showed mild cerebral atrophy. Catatonia was diagnosed after ruling out other differential diagnoses. Bush Francis catatonia rating scale was applied and the severity score was 23. Injection Lorazepam 2 mg intramuscularly was started, and the patient showed improvement in next three hours, so injection lorazepam 2 mg two times a day was initiated. From second day onwards he became communicative and tablet lorazepam 1 mg three times a day was given. On review consultation, after two days he had irritable affect, increased psychomotor activity and overvalued ideas of persecution towards family members. Tablet Olanzapine 5 mg was started which was continued on discharge. Lorazepam was tapered off over the next three days. On follow-up after fifteen days he was asymptomatic in respect of catatonia but was still restless and abusive at times. Olanzapine was increased to 10 mg per day and after 2 weeks his psychotic symptoms also subsided.

Case No- 4

A twenty years old girl engineering student from urban background was on medication for SLE for last one year. She had no past and family history of psychiatric illness and had a well-adjusted personality. She got admitted in the medicine ward of our hospital for acute exacerbation of SLE, manifesting as fever, multiple joints pain, generalized weakness for last twenty days. On the third day of hospital stay she was referred to psychiatry OPD. On evaluation, she was found to have complaints of repetitive intrusive thoughts of fear of contamination for last one month. Those thoughts were disturbing, and she tried to stop them by praying but could not do so. Gradually she also started to wash her hands repetitively to overcome that fear but soon those thoughts were coming again. Thus, she was spending more than five hours every day in washing hands and clothes and taking bath, even when she had fever she was unable to stop doing that. Her functioning was grossly affected because of this. On examination she had obsession of fear of contamination, compulsive washing, anxious affect. The Yale–Brown Obsessive Compulsive Scale (Y-BOCS) score was 24 (severe). Her blood investigations showed raised C reactive protein, liver function was mildly deranged. Other blood investigations, microbiological investigations were normal. She was diagnosed as obsessive-compulsive disorder fair to good insight. Tablet fluvoxamine was started 50 mg and after 1 week increased to 100 mg along with exposure and response prevention therapy. On our subsequent follow ups over next 1 month she showed marked improvement in Y-BOCS score while on fluvoxamine 100 mg.

DISCUSSION:

Systemic lupus erythematosus (SLE) is a systemic autoimmune disease characterised by the production of various autoantibodies, such as antinuclear or anti-DNA antibodies. It affects multiple organ systems of body which also includes the nervous system. NPSLE has diverse and highly heterogeneous clinical phenotypes, which are often underdiagnosed or misdiagnosed. There had been individual case reports in literature regarding neuropsychiatric manifestations of SLE. But in our case series there are 4 distinct forms of presenting symptoms. Most of the case reports in the literature are about psychosis and mood disorders in SLE patients. Acute psychosis is an uncommon but well-recognized manifestation of NPSLE. Often it is termed as lupus psychosis. Lupus psychosis frequently occurs in association with additional neuropsychiatric manifestations (e.g. seizure, depression). It requires early aggressive treatment, and is followed by long-term remission in the majority of cases.[8, 9] Our first case is of a patient who developed psychosis after staying off medication for two months and eventually attained remission with antipsychotics and proper treatment of SLE. Mood disorders such as depression can develop at different stages of SLE and the severity of depression can range from mild depressive symptoms to more severe clinical major depressive disorders. Mood disorders may represent neuropsychiatric manifestations of SLE disease mediated by different cytokines and autoantibodies and may also be a psychological consequence of the stress of having a chronic major disease. Depression worsens the prognosis and quality of life of SLE patients and requires prompt management. The second case of our series is of major depressive disorder in a long standing non ambulatory patient of SLE who was successfully treated by selective serotonin reuptake inhibitor (escitalopram) and cognitive behavior therapy. Till now catatonia has not been categorized as a feature of NPSLE although the presentation is not unknown. Although the majority of SLE patients show neuropsychiatric manifestations but reporting of catatonia is often missed as its presentation can mimic other neurological causes affecting movement, behaviour and cognition. Medications which may be used for the treatment of other NPSLE symptoms such as antipsychotics may lead to the clinical deterioration of catatonia. Antipsychotics should be given only after the catatonia remission and only if necessary. [6] Although in almost all the cases of literature, female SLE patients had developed catatonia minimum one year post diagnosis but in our case it was a young male patient who developed catatonia within five months of diagnosis of SLE. Literature shows very few cases of OCD in SLE patients, although obsessive compulsive symptoms are common. The fact that OCD are more frequent in patients with Sydenham's chorea, as well as in patients with rheumatic fever is suggestive that autoimmune mechanisms may be one of the pathogeneses of OCD in SLE patients. In our last case the patient had OCD which hampered her day to day functioning. She was managed by a combination of both pharmacological therapy (fluvoxamine) and behavioral therapy.

CONCLUSION:

During the last few decades, overwhelming efforts were made to understand the etiopathogenesis of NPSLE and also how to improve the classification, diagnosis and management of NPSLE. Our case series shows four distinct types of psychiatric manifestation in patients of SLE. This highlights the need of thorough evaluation in the form of history taking, physical and mental status examination and investigations in all the SLE patients having neurological and psychiatric symptoms. There is further research indicated to understand the prevalence, pathophysiology, clinical presentations and proper management of NPSLE.

List Of Abbreviations:

NPSLE= Neuropsychiatric systemic lupus erythematosus
NCCT= Non contrast computed tomography
CECT= Contrast-enhanced computed tomography
SSRI= Selective Serotonin Receptor Inhibitor
GTCS= Generalised tonic-clonic seizure
OCD= obsessive compulsive disorder
OPD= Out Patient Department

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