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NEUROSYPHILIS IN A YOUNG ADULT MALE PRESENTING AS SCHIZOPHRENIA- A CASE REPORT

Psychiatry

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ABSTRACT

Syphilis is a venereal disease and when left untreated can progress to neurosyphilis. Neurosyphilis can present with wide range of symptoms and can often be misdiagnosed as primary psychiatric illness. Therefore, there is a need to include workup for neurosyphilis in cases presenting as psychosis but not responding to standard treatment protocol. Psychotic manifestations may be indistinguishable from schizophrenia and if not diagnosed, patients can be subjected to long-term antipsychotic therapy which has its own adverse effects and also the risk of spread of the venereal infection goes unnoticed. The following report describes the case of an eighteen-year-old male presenting with psychotic illness and not responding to multiple antipsychotic trials and was later diagnosed with neurosyphilis.

KEYWORDS

Neurosyphilis, psychosis, schizophrenia, antipsychotic

INTRODUCTION

Syphilis known to be a great imitator is a venereal disease which affects multiple organ systems [1]. Syphilis is caused by spirochetes Treponema pallidum and the disease progresses in three stages: primary stage, secondary stage, tertiary stage [2]. The illness may remain latent for many years in between stages. Mainly, the tertiary phase involves involvement of cardio vascular system and central nervous system and may occur after a lag period of one year to two decades from the primary infection. Neurosyphilis may involve the meninges and vascular structures and later it may progress to involve the brain parenchyma and spinal cord [2].

If left untreated at primary stage, thirty percentage of cases can progress to neurosyphilis [3]. Neurosyphilis may have a wide array of presentation: well-known physical presentations include general paresis, tabes dorsalis, Argyll Robertson pupil. However, many patients are also known to present with psychiatric manifestations like personality changes, aggression, mania, paranoia, perceptual abnormalities and cognitive impairments[4]. A person with neurosyphilis can present with dementia-like symptoms which often is misdiagnosed as dementia with psychosis. Manifestation of schizophrenia- like symptoms due to neurosyphilis can also be present which is often overlooked. Twenty-seven percentage of patients can present with depressive symptoms with melancholic features, psychomotor retardation and suicidal thoughts [5]. We are going to discus one such case of neurosyphilis presenting as early onset psychosis.

Case History

An eighteen-year-old male was admitted in our institute with complaints of irrelevant speech, unwarranted aggression, declining self-care, irritability and decreased sleep for two years. The onset was gradual, course was continuous and deteriorating. There was no family history of major mental illnesses, however, his mother had expired due to sudden cardiac complications in her early thirties. Patient was educated till tenth standard and passed his exams with average marks, but over the last two years of illness he developed significant intellectual deficits. There was no history however of developmental delays or major illnesses during childhood.

After admission, Brief Psychiatric Rating Scale (BPRS) was applied and initial score was 69(markedly ill). He was started on Tablet Olanzapine till adequate dose and duration but there was little improvement and so was changed over to tablet risperidone up to 4mg after which patient developed extrapyramidal side effects for which tablet trihexyphenidyl was added. However, patient showed minimal improvement.

A detailed blood investigation comprising of routine parameters and serological investigations revealed Rapid Plasma Reagin (RPR) test for syphilis to be reactive. It was followed by a confirmatory test FTA-Abs (Fluorescent Treponemal Antibody Absorption test) and obtained value was Positive. Subsequently, to arrive at a more specific diagnosis of neurosyphilis, a biochemical and microbiological assessment of the cerebrospinal fluid along with VDRL test was done which established our diagnosis and the results are as shown below in Table 1.

The patient was referred for physician's opinion and he was started on Injection Ceftriaxone two gram intravenous twice a day after a negative skin test and continued for fourteen days as advised. Meanwhile, when this treatment was started, we stopped our previous treatment of antipsychotics and only tablet clonazepam 0.5 milligram was continued as and when needed.

There was significant improvement in his behavioural symptoms after starting this treatment as highlighted by the reduction in BPRS scores as shown in Figure 1. The patient was then discharged and called for follow up visit and a referral for Neurology opinion was given.

Table 1: CSFAnalysis

PHYSICAL	AMOUNT	2.5ml	
	COLOUR	Colourless	
	APPEARANCE	clear	
	COAGULUM	Absent	
BIOCHEMICAL	SUGAR	58mg/dl	Normal: 40-80mg/dL
	PROTEIN	200mg/dl	Normal: 20-45mg/dL
MICROSCOPIC	TOTAL WBC	8-10 cells/cumm	Normal: 0-5 cells/cumm
	POLYMORPHS	NIL	
	LYMPHOCYTES	100%	
	RBC	NIL	
VDRL (QUALITATIVE)		REACTIVE	

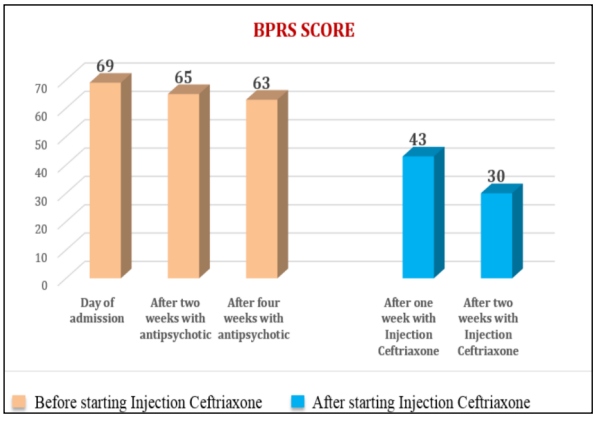

Figure 1: BPRS Score Before And After Starting Injection Ceftriaxone.

DISCUSSION

Our patient exclusively showed psychiatric manifestations leading to admission in a psychiatric unit with a very uncommon presentation, considering early age, no significant neurological signs on examination and also no predisposing sexual history; making it highly possible to miss the diagnosis. A study done in North-Eastern parts of India, enumerated different presentations of neurosyphilis cases out of which two patients had presented with psychotic symptoms [6]. Therefore, it is important to come towards the correct diagnosis as the chance of missing out and not achieving improvement with antipsychotic treatment can lead us to falsely categorise these cases to be treatment resistant.

A family history of sudden cardiac death of the patient's mother in her thirties was obtained for which there was no documentation, raised a suspicion of a probability of in-utero transmission of the illness which could not be confirmed. Extensive laboratory investigations and certain clinical presentation, like a significant intellectual impairment from his premorbid level which is unlikely to be present so early in the course of a psychotic illness, directed towards a possibility of an organic aetiology and helped us to arrive at the correct diagnosis. Therefore, the need of detailed family history arises and should be scrutinised carefully.

In cases such as ours, in absence of proper history about the source of infection, CSF examination including VDRL test should be considered to rule out neurosyphilis, as it is easily available in most hospital set ups and also it is considered as a gold standard diagnostic tool for neurosyphilis [7].

As the disease may remain latent and also due to development of intellectual deficits in patients, the risk of spread of infection through unprotected intercourse becomes high. Therefore, it is important to make correct diagnosis, treat at earliest and psycho-educate the family members. Delay in intervention can lead to worsening of psychotic symptoms and loss socio-occupational functions.

The psychotic manifestations of neurosyphilis can be indistinguishable from Schizophrenia[8]. Though the patient showed symptomatic improvement with treatment regimen for neurosyphilis, yet the need for addition of antipsychotic medicines needs to be evaluated in follow up. It is also important to acknowledge the possibility of a variation in presentation in the further course of illness. Therefore, the treating team need to be aware about clinical presentation and treatment of neurosyphilis and include it as an important differential while evaluating patients [9].

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