Neuropsychiatric Manifestations of Neurosyphilis: A Case Report

Abdul Taib N\textsuperscript{1}, Seed HF\textsuperscript{1}, Yeoh CM\textsuperscript{1}, Thong KS\textsuperscript{2}

\textsuperscript{1}Hospital Sentosa, Kuching, Sarawak, Malaysia
\textsuperscript{2}Department of Psychiatry and Mental Health, Sarawak General Hospital, Kuching, Sarawak, Malaysia

Abstract

Neurosyphilis has been known to present with wide array of neuropsychiatric signs and symptoms. However little is known of the severity of its manifestations especially in our Malaysia setting. We are reporting a case of a middle-aged ex-military Malay man who contracted neurosyphilis during active service and since then had severe neuropsychiatric symptoms which caused deterioration in his activities of daily living skills which warrants constant supervision. We discuss the various presentations of neurosyphilis and its sequelae despite completion of antibiotics treatment.

Keywords: Neurosyphilis, Neuropsychiatry, Malaysia

Introduction

Neurosyphilis is caused by dissemination of \textit{Treponema pallidum} into the central nervous system\textsuperscript{1}. The most common mode of transmission is through sexual contact\textsuperscript{2}. Despite the fact that disease is well controlled by the treatment with penicillin, neurosyphilis is still linked to severe neuropsychiatric manifestations\textsuperscript{3}. Psychiatric manifestations may be the main reason why patients seek medical help. Loss of higher cortical functions, irritability and subtle deterioration of cognition especially concentration can be the early manifestation\textsuperscript{4}. Acute psychosis, paranoid delusions, personality changes, affective disorders and cognitive impairments are the associated psychiatric symptoms\textsuperscript{5}. This case report describes a military gentleman who presented with severe neuropsychiatric manifestation of neurosyphilis.

Case Report

A 44 years old military Malay man presented with slurring of speech, slowness in his movement and irritability for 1 year. He demonstrated disorganized and disinhibited behaviors such as making inappropriate obscene and lewd gestures towards the opposite sex. He also experienced auditory hallucination and presented with self-laughing and self-talking behaviors. Thorough investigations were done. He was tested positive for syphilis (VDRL positive with titre of 1:1). MRI brain showed marked cerebral atrophy. Other investigations revealed normal findings. He
was diagnosed to have neurosyphilis with neuropsychiatric sequelae.

He subsequently defaulted his antibiotic treatment and follow-up for syphilis. He was subsequently brought to psychiatry team for significant worsening of his abnormal behavior. He was unable to cope with his activities of daily living at home and his duties at work place. Constant supervision was required. He became easily distracted and his emotions were labile. He was easily angered, even by trivial matters.

During assessment, he was noted to have hallucinatory behaviors such as self-talking and self-laughing. His speech was slurred and irrelevant most of the time. His affect was labile with the occasional irritability during interview. His attention and concentration was impaired. He denies auditory hallucination. His thought process was slow. There was difficulty assessing his cognitive functions during the interview. His judgment was impaired and he had no insight regarding his illness.

He was restarted back on the antibiotic treatment of syphilis by neuro-medical team. He was tried on various antipsychotic such as Quetiapine and Olanzapine. He had shown some symptomatic improvement. There was a reduction in his disorganized and disinhibited behaviors. He was also less irritable. Repeated assessments demonstrated poor calculating ability, impairment of comprehension of complex conversation, difficulty with planning and organizing. He also had difficulties in questions involving attention and short term memory function. These impairments hampered him from resuming his daily and work related activities.

An evaluation for permanent impairment that has been done on the patient based on American Medical Association (AMA) guides suggested class 4 impairment in his activity of daily living, social functioning, concentration and adaptation. Another evaluation based on Social Security Organization (SOCSO) guidelines on impairment and disability assessment of traumatic injuries, occupational disease and invalidity 2nd Edition that was done which showed class 4 severe impairment; whole person impairment is 60%. Montreal cognitive assessment (MOCA) showed marked impairment with scoring 14.

**Discussion**

Syphilis is one of the main sexually transmitted infection (STI) in Malaysia occurring about 5.44 per 100 000 population. Prevalence of STI among military personnel was estimated to be higher than those in general population. In Malaysia, although there is limited epidemiological study of syphilis amongst the military community, two studies showed that there was a lack of knowledge regarding STI among army personnel and poor STI control program.

Syphilis can present with various clinical signs and symptoms as it can affect different systems including the central nervous system, which is known as neurosyphilis. The various forms of neurosyphilis include asymptomatic, meningal, meningo-vascular, and parenchymal. The most common form of neurosyphilis is asymptomatic neurosyphilis whereas; parenchymal neurosyphilis is the most common presentation among symptomatic cases. It presents as psychiatric manifestations, cognitive impairment and mood instability. The frequency of psychiatric manifestations associated with neurosyphilis reported ranges from 33% to 86%. The most common presenting symptoms are
personality change and hallucinations. The psychotic symptoms can vary from specific forms of hallucination to various schizophrenia-like symptoms.

Neurosyphilis can also present with a wide variety of non-specific cognitive impairments such as deficits in memory, judgment, poor orientation, dementia difficulty in concentration and inattention. About 27% of patients have depressive symptoms in addition to psychomotor retardation, melancholia and suicidal thoughts. However, there were also reports of patients presenting with expansive mood, manic episodes, rage, and anxiety problems thus indicating that neurosyphilis may mimic almost any form of psychiatric disorder. Studies have shown that even years after antibiotic treatment, neuropsychiatric symptoms can still persist. These variations in symptoms were seen in our patient whereby he experienced severe psychotic and mood symptoms with cognitive deficits that persist despite completing antibiotic treatment for syphilis.

In view of the diagnostic challenges posed by a various symptoms of neurosyphilis, it is recommended to do a blood screening for syphilis when investigating psychiatric patients with high risk behaviors. Apart from antipsychotic in the treatment of neurosyphilis, electroconvulsive therapy (ECT) was indicated in patients with neurosyphilis and psychosis who respond inadequately to psychopharmacological agents. Treatment with ECT is shown to be more effective than the treatment with antipsychotic and the patient remained stable for a long period.

In conclusion, a high index of suspicion of syphilis is needed in patients who present with psychiatric symptoms with high risk behavior. The persistence of psychiatric sequelae is not uncommon after the completion of treatment for syphilis.

References


10. Crozatti LL, Houat de B M, Lopes BNA, Ferraz de C FP. Atypical behavioral and psychiatric symptoms: Neurosyphilis should always be considered. Autopsy Case Report. 2015 Sep 30; 5(3); 43-47.


Corresponding Author
Dr. Nur Iwana binti Abdul Taib
Hospital Sentosa,
Batu 7, Jalan Penrissen, Kota Sentosa,
93250 Kuching, Sarawak, Malaysia
Tel: +6082-612321

Email: iwana_xq@hotmail.com