



## CASE REPORT

### NEUROSYPHILIS MISTAKEN AS SPINOCEREBELLAR ATAXIA - A CASE REPORT

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#### ABSTRACT

Neurosyphilis can have varied clinical manifestations. New generation physicians and neurologists may not be aware of the clinical manifestations of neurosyphilis. Here we report a case of neurosyphilis with optic atrophy and nystagmus misdiagnosed as spinocerebellar ataxia. This case underscores the importance of Serum VDRL test in patients with optic atrophy, nystagmus and cognitive decline.

#### Key words:

Neurosyphilis, Ataxia,  
Nystagmus, CSF VDRL.

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## INTRODUCTION

Neurosyphilis can have varied neurological manifestations and is known as a great mimicker. Because neurosyphilis is uncommon these days there is a great delay before reaching the correct diagnosis. Here we are reporting a case of neurosyphilis misdiagnosed as spinocerebellar ataxia.

## CASE REPORT

A 57 year old man with no previous co morbidities was admitted for the evaluation of bilateral blindness, profound horizontal and vertical jerky nystagmus and behavioral issues associated with intermittent visual hallucinations. He was symptomatic for the past 2 years and his symptoms had worsened over the past 6 months. Patient also had emotional lability. On ophthalmic evaluation, perception of light was absent bilaterally. He also had right eye old uveitis, senile immature cataract, bilateral primary optic atrophy and Argyll Robertson pupil. His motor examination was normal but had bilateral brisk reflexes with flexor plantar response. Sensory examination was normal. Romberg's sign was negative. Routine hematological and biochemical tests were unremarkable.

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His serum VDRL was reactive in 1:64 dilution. Serum TPHA was also positive. CSF showed mildly raised proteins, normal glucose, no cells. CSF VDRL was reactive in 1:4 dilution. MRI brain with contrast showed minimal periventricular and subcortical white matter ischemic changes. Patient was treated with benzylpenicillin (4MU) 4 hourly for 14 days. There was no significant improvement in his neurological symptoms with treatment.

## DISCUSSION

The case presented here is an example of neurosyphilis with optic atrophy and bilateral horizontal as well as down beating nystagmus, being mistakenly diagnosed as spinocerebellar ataxia for many years. Though he had no ataxia, the nystagmus tempted the clinician to think of cerebellar dysfunction and a wrong diagnosis of spinocerebellar ataxia was made. Neurosyphilis can occur during the early and late stages of syphilis. Early neurosyphilis develops within weeks to years of primary infection. During early neurosyphilis meninges is primarily affected. The manifestations of early neurosyphilis includes syphilitic meningitis manifesting as cranial neuropathies, meningovascular syphilis presenting with ischemic stroke or asymptomatic neurosyphilis. Late neurosyphilis occurs years to decades after exposure. Here the presentation may be cerebral or spinal gummatous disease or the classic parenchymal forms affecting the brain and spinal

cord or nerve roots. When the brain parenchyma is involved presentation is called general paresis of insane or syphilitic encephalitis. The involvement of spinal cord and nerve roots results in tabes dorsalis. CSF examination should be performed to evaluate for neurosyphilis in all patients with positive syphilis serology and neurologic manifestations. (Jay, 2006) Neurosyphilis presenting as ataxia has been rarely reported. (Sabre *et al.*, 2016) This case emphasizes the need for evaluation for neurosyphilis in every case presenting as optic atrophy and nystagmus. A serum VDRL test should be asked in all cases of cognitive decline, optic atrophy and nystagmus of unknown cause. A late diagnosis and late treatment may have serious neurological sequelae as in this case.

### Consent

Informed consent of the patient was taken.

*We confirm that we have read the journal's position on issues involved in ethical publication and affirm that this article is*

*consistent with those guidelines. We have read and understood the journal policy on declaration of interests and declare that we have no competing interests. All authors have completed the disclosure forms and declare no support from any organization for the submitted work; no financial relationships with any organizations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.*

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