NEUROSYPHILIS, EYES DON'T SEE WHAT MIND DOESN'T KNOW. AN OLD TREATABLE DISEASE WITH WHITE MATTER LESION JUST LIKE MULTIPLE SCLEROSIS IN A YOUNG PATIENT

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ABSTRACT

Syphilis is a bacterial infection caused by spirochete bacterium treponemapallidum. It is transmitted from one person to another through direct contact during sexual intercourse. During pregnancy the infection can also pass from mother to her child. Men who have sex with men are showing fastest rise in syphilis cases. Highest risk populations are young adults aged between 15 to 25 years. Neurosyphilis can occur anytime during the course of syphilis, it was rampant in the preantibiotic era whereas in the modern world it is considered a disease of the past and is rarely seen. However it is resurfacing the medical literature with sporadic cases being reported from all over the world. Here we are reporting a young male who presented with spasticity and ataxia; on investigation he had white matter lesions on MRI in the brain and spinal cord. His CSF showed pleocytosis and his blood and CSF serology was positive for syphilis. The patient later on confirmed sexual contacts in the past hence diagnosis was confirmed and he responded very well to treatment with nearly complete recovery. It is of prime importance to consider this disease in neurological differential diagnosis so as to identify this disease as early as possible and to reduce the mortality risk associated with delayed diagnosis.

Keywords: Neurosyphilis, Syphilis, Sexually transmitted disease.

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INTRODUCTION

Neurosyphilis is an infection of the brain or spinal cord caused by the spirochete treponema-pallidum[1]. Invasion of the CNS occurs early in the course of untreated syphilis but can occur at any time during the course of illness[2]. Of late, there has been an alarming increase, worldwide, in the incidence, especially in urban areas[2]. Neurosyphilis is a life-threatening disease in this era of HIV epidemic. The incidence is increasing and 10-50% of HIV positive are also suffering from syphilis as unprotected sex is a common risk factor in both. The annual incidence in United States is 1.2 million people having both HIV and syphilis. There is a problem in diagnosis as no culture facility is available and even CSF serological tests have their limitation[3]. Here we report a case of 24 year old male. He presented with white matter enhancing lesions mimicking MS both in the brain and spinal cord. However he was very well treated with near complete recovery.

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CASE REPORT

A 24 year old unmarried male, presented in PNS Shifa Hospital in March 2014 with complains of numbness and pain of both legs associated with radicular left flank pain for 1 month. Numbness had progressed to pain in 15 days. There was neither history of preceding fever, problem with vision or swallowing, nor associated bowel or bladder issues. He was not a known Diabetic or hypertensive. On physical examination, sensory system showed decrease sensation for touch, pain and temperature in lower limbs with absent vibration sensation. Motor system showed increased tone and reflexes in both lower limbs with up going planters.Upper limbs examination showed intact sensory system with brisk reflexes. Cerebellar signs were absent but Rhomberg's sign was positive on eye closure. There was no sensory level on the trunk and fundi were normal. Rest of the examination was

normal. Lab investigations were done for inflammatory markers, autoimmune profile and infectious screen which came out to be within normal range. It was followed by MRI brain and spinal cord with contrast which revealed enhancement of meninges with scattered hyper intense contrast enhancing lesions in the brain

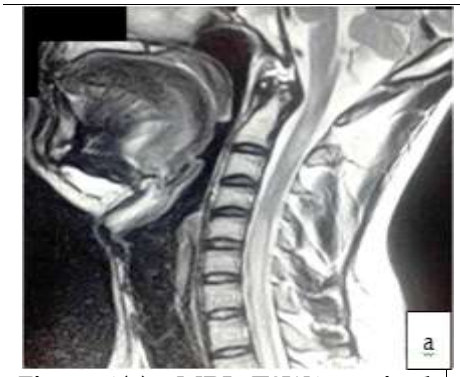


Figure-1(a): MRI T2W1 sagittal image of spinal cord showing hyperintense cord lesion.

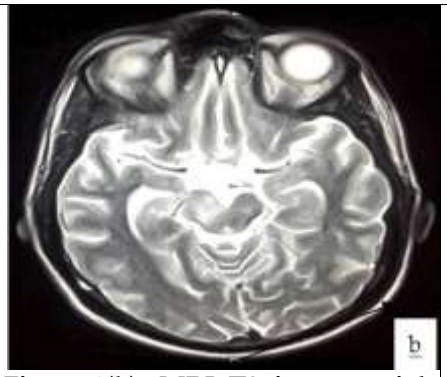


Figure-1(b): MRI T2 image, axial section of brain showing T2 hyper-intense lesion.

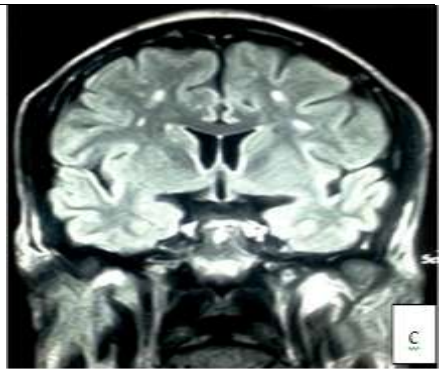
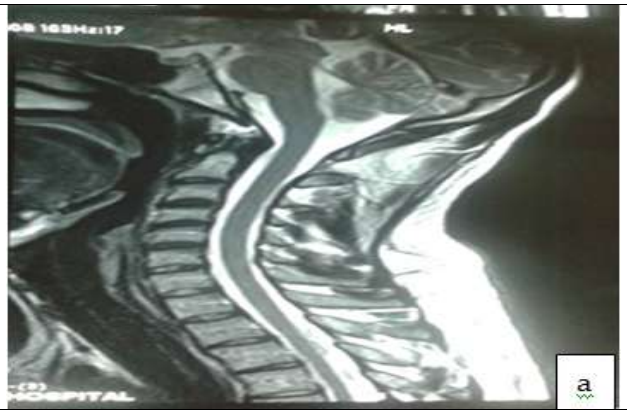


Figure-1(c): Flair image showing nonspecific white matter lesion.

and T2 hyper intense contrast enhancing lesions at cervical cord (fig-1 a, b & c).

CSF examination showed increased proteins with 300 cells/cm mostly lymphocytes. Such high cells in CSF does not match with the diagnosis of MS so we broadened our differential to neuroinflammatory causes,his initial blood VDRL was negative, but later on after few days both CSF report for VDRL and TPHA turned out to be positive. Hence we repeated his VDRL with serial dilution and it was positive too, confirming the Diagnosis of Neurosyphilis. He was started on Penicillin and steroids. Since syphilis was not the first differential here so we went back to the patient and re examined him and took a detailed sexual history. He belongs to a well to do family. He was sexually active at the age of 14 years while in boarding school. His earlier sexual exposure started with homosexual contacts, and later on shifted to commercial sex workers. At that age he was not using barrier methods of contraception. Till now with better education he has restricted himself to one or two partners and using condoms for personal protection. He was not sure about any chancre or penile lesion in the past. He started improving slowly with treatment and was discharged home with no complications. His HIV status was negative and further investigations including Echo and Ocular



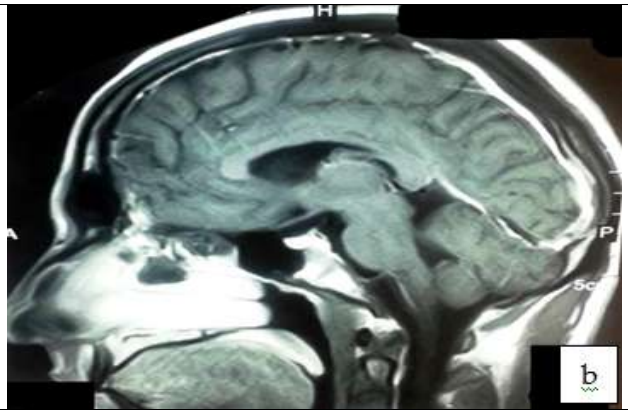


Figure-2 (a & b): MRI T2W2 Sagittal image of spine and brain showing improvement.

examination was negative for any evidence of syphilis. Serial MRIs and CSF examination were done to monitor the disease progression until March 2015 which showed regression of lesions. (fig-2 a & b) his last neurological examination was normal without any spasticity but a slightly abnormal Rhomberg's test on eye closure.

DISCUSSION

Syphilis was rampant before the antibiotic era and Neurosyphilis was the top differential in neuro-psychiatry practice. However after the advent of antibiotics, better understanding of communicable diseases and educational levels of masses, this has fallen apart[4]. But sporadic cases are reported throughout the medical literature. However with the HIV epidemic there has been a new surge of cases worldwide[5]. The pathology of neurosyphilis is parenchymal involvement of tissues. Persons who are not treated for persistent CSF abnormalities are at risk of developing clinically apparent disease[5].

- Neurosyphilis is divided into four different forms[6]
- Asymptomatic neurosyphilis
- Meningovascular neurosyphilis
- Tabes Dorsalis
- General Paresis of Insane

The clinical spectrum of cases is changing and we see atypical or incomplete cases than florid one depicted in literature[7]. It is this spectrum that we need to identify and treat. It must be emphasized that this remains a clinical diagnosis and should come in the differential of most of our neurological syndromes, that's why we sent his initial VDRL as screening test. Failure to pick up the cases early in the course of disease is due to low index of suspicion and secondly the very young age of patient when nobody could have suspected Neurosyphilis and the same happened with us[8]. The idea behind publishing this case is many folds top most is to aware medical community about this devastating but completely curable disease. Secondly, in spite of a religious community, high risk sexual behavior is very much prevalent in our society. Mere ignoring the facts won't help us here. It was his lack of knowledge regarding prevention of STD resulted in this problem. Further the mean age of patients from Indian series by Kyal et all was 37.6 years whereas our case was only 24 years old which is quite young hence instead of ignoring the issue we need to think on lines of sexual education for our teens[8]. Further our case has no ocular lesions or any behavioral or cognitive decline which is expected in such cases. Even the lesions seen on MRI were not very typical of Neurosyphilis which includes infarcts due to vasculitis, encephalitic like lesion, mesial temporal sclerosis and atrophy. However there was non specific white matter lesions and one enhancing lesion in brain and spinal cord and thus by definition were disseminated in time and space just like multiple sclerosis but to our luck cerebrospinal fluids report helped us in narrowing the differential from demyelination to neuro-inflammation and thinking outside the box we were able to diagnose and treat him. No such case has been reported from Pakistan in medical literature with such presentation. Lastly a false negative blood VDRL can result due to prozone phenomenon and in that case writing a TPHA or repeating with serial dilution can help[9]. We should not miss this treatable disorder which initially mimicked as MS like lesions on neuro-radiology for which no definite treatment is available in Pakistan and if available is even very expensive compared to a completely curable disease with antibiotics, but if left untreated can cause grave consequences[10].

CONCLUSION

Syphilis once a disease of past is resurfacing the medical literature and sporadic cases with atypical presentations are seen. We need to create more awareness among health care personal for the diagnosis of this disease as it is easily treatable.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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