



NEUROSYPHILIS IN 21ST CENTURY: A FLORID MANIFESTATION

Dr Naim Kadri	Associate Professor, Internal Medicine, Department Of Medicine, B.J. Medical College, Ahmedabad.
Dr Darshana Makwana	Assistant Professor, Internal Medicine, Department Of Medicine, B.J. Medical College, Ahmedabad.
Dr Ruksharbanu Sama*	3 rd Year Resident Doctor, Internal Medicine, Department Of Medicine, B.J. Medical College, Ahmedabad. * Corresponding Author
Dr Rachit Agrawal	2 nd Year Resident Doctor, Internal Medicine, Department Of Medicine, B.J. Medical College, Ahmedabad.
Dr Akshay Tajpara	1 st Year Resident Doctor, Internal Medicine, Department Of Medicine, B.J. Medical College, Ahmedabad.

ABSTRACT A 23-year-old male patient presented with history of weakness of both lower limbs along with sense of imbalance and difficulty in walking. He had a past history of primary syphilis 3 months before. Patient was investigated for paraparesis and possibility of neurosyphilis was considered and diagnosis was confirmed by positive serology for syphilis in cerebrospinal fluid and diagnosed as Tabes dorsalis. In current era of antibiotics, a case of neurosyphilis as early manifestation is very rare but if it occurs it has very florid manifestations such as tabes dorsalis, general paresis of insane, meningal syphilis and meningovascular syphilis.

KEYWORDS :**INTRODUCTION:**

Syphilis a chronic systemic infection caused by *Treponema pallidum*. It is sexually transmitted disease. It is characterized by episodes of active disease interrupted by period of latency. Stages of Syphilis namely: primary, secondary and tertiary. In Primary syphilis lesion appears as ulcer over local site and regional lymphadenopathy. Secondary stage is characterized by generalized mucosa and cutaneous lesions and Generalized lymphadenopathy which is followed by a latent period of subclinical infection lasting years or decades. Tertiary syphilis is characterized by destructive mucocutaneous, skeletal, parenchymal lesions, Aortitis and late CNS manifestations. Central nervous system involvement may occur early in infection which may be symptomatic or asymptomatic.

CASE:**CLINICAL PRESENTATION:**

A 23-year-old male patient admitted with weakness of both lower limbs associated with sense of imbalance and difficulty in walking for 30 days. Detailed history revealed history of tingling and numbness over both lower limb for 1 month. No complaint of pain and temperature sensation loss and bowel bladder incontinence. Patient had a history of painless penile ulcer 3 months before and diagnosed as primary syphilis for which benzathine penicillin G 1.2MU taken weekly for three weeks. Patient was unmarried, bisexual with both active partners and had history of unprotected sexual activity since 2 years. He is non alcoholic and had no history of nausea, vomiting, diarrhea, fever and recent immunization.

The central nervous system examination revealed normal higher mental functions and cranial nerves. Patients finding were limited to bilateral lower limb. Power was grade 3 in both lower limbs and grade 5 in upper limbs. The vibration and joint position sense were lost below knee on both sides. The Romberg sign was positive and gait was ataxic and broad based. The deep tendon reflexes like knee and ankle were lost. Superficial reflexes like abdominal reflex was absent with bilateral flexor planter response. Ophthalmological examination revealed normal conjunctival, corneal and pupillary reflexes and funduscopy examination was normal.

INVESTIGATION:

The complete hemogram showed normocytic normochromic anemia with normal ESR and RETIC COUNT. The renal function and liver function test, random blood sugar, VIT B12 level was normal. Serum HIV AND HEPATITIS B was non-reactive. Serum RPR was positive

with 1:64 titer. The cerebrospinal fluid analysis shows total cells 10 with lymphocytic pleocytosis (lymphocyte 60%), increased protein concentration (115mg/dl) and CSF VDRL positive. Electromyography and nerve conduction velocity suggestive of axonal and demyelinating type of sensory motor polyneuropathy. MRI brain and spinal cord was normal. 2D ECHO was normal. So patient was diagnosed as TABES DORSALIS.

TREATMENT:

Patient was treated with injection Aqueous crystalline penicillin 3 million units intravenously 4 hourly for 21 days.

OUTCOME:

Patient started improving after 1 week and in form of decreased ataxia and ability to walk without support with no broad base gait. Patient was discharged after 21 days with no residual abnormality.

DISCUSSION:

Traditionally neurosyphilis has been considered a late manifestation of syphilis but this view is inaccurate. CNS syphilis represents a continuum encompassing early invasion usually within first week of infection or months to years of asymptomatic involvement and in some cases development of early or late neurologic manifestation.

Asymptomatic neurosyphilis is made in patients who lack neurological symptoms and signs but who have CSF abnormalities including mononuclear pleocytosis, increased protein concentration or reactivity in the CSF VDRL test. It should be treated as neurosyphilis particularly in concurrent HIV infection.

Symptomatic neurosyphilis include meningal, meningovascular and parenchymatous syphilis which includes general paresis and tabes dorsalis. MENINGEAL SYPHILIS presents with headache, nausea, vomiting, neck stiffness. MENINGOVASCULAR SYPHILIS reflects meningitis together with inflammatory vasculitis of small, medium or large vessels and most common presentation is stroke syndrome. GENERAL PARESIS reflects widespread late parenchymal damage related to Personality, Affect, hyperactive Reflexes, Argyll Robertson pupil, Sensorium (illusion, delusion, hallucination), Intellect (a decrease in recent memory and in capacity for orientation, calculation, judgment, and insight) and Speech. TABES DORSALIS presents as symptoms and signs of demyelination of the posterior columns, dorsal root and dorsal root ganglia including ataxia, foot drop, paresthesia, bladder disturbances, impotence, areflexia, and loss of positional, deep

pain and temperature sensation. The small irregular Argyll Robertson pupil is feature of both tabes dorsalis and general paresis reacts to accommodation but not to light.

Our patient presented with characteristic features of tabes dorsalis except bladder disturbance, visual disturbance and Argyll Robertson pupil. Reactive CSF VDRL is reliable evidence for neurosyphilis. Normal LFT, RFT, RBS, VIT B12, MRI Brain ad spine in present case exclude other possible differential diagnosis like alcoholic neuropathy, diabetes mellitus, spinal trauma, syringomyelia, vitamin B12 deficiency and Gullian barre syndrome.

CONCLUSION:

Though antibiotics may not reverse the extensive changes of disease manifestation but they may arrest the progression of TABES DORSALIS in most of cases. Therefore, in current era early diagnosis and prompt treatment of tabes dorsalis is crucial to prevent severe debilitating conditions.

REFERENCES:

- 1) HARRISON'S PRINCIPLE OF INTERNAL MEDICINE 20TH EDITION
- 2) MANDALL, DOUGLAS AND BENNETT'S PRINCIPLES AND PRACTICES OF INFECTIONS DISEASES
- 3) WEBSITE: CDC: CENTRE FOR DISEASE CONTROL AND PREVENTION: GUIDELINES FOR SEXUALLY TRANSMITTED DISEASE. (<http://www.cdc.gov/STD>)
- 4) HOOK EW. syphilis. lancet. 2017;389:15501557 (pubmed (<http://www.ncbi.nlm.nih.gov/pubmed/27993382>)))
- 5) Bhai neurosyphilis update: a current review's infect dis rep 2005;7;277-284(pubmed(<http://www.ncbi.nlm.nih.gov/pubmed/25896752>)))
- 6) koyal AK, clinical spectrum of neurosyphilis in north east India. neuroindia 2011;59:344-350(pubmed(<http://www.ncbi.nlm.nih.gov/pubmed/21743160>)))