



**TUBERCULOUS MYELITIS AS AN UNUSUAL PRESENTATION OF A COMMON
DISEASE IN SUDAN**

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ABSTRACT

Background: Tuberculosis(TB) is a common disease in Sudan. Neurological consequences of TB are frequently encountered in our practice of neurology particularly tuberculosis of the spine(Pott's disease). There are few case reports of tuberculous myelitis in literature. **Case description:** A 47 year old man, farmer from eastern Sudan presented with lower limbs weakness who was diagnosed clinically, with the help of MRI spine and supported laboratory tests as tuberculous myelitis. IV methyl prednisolone was used initially with remarkable response. **Discussion:** In our case we match between the clinical sense and image results so we came with a preliminary diagnosis which was infection and we came with a final diagnosis of myelitis rather than discitis. **Conclusion:** Our case highlights that tuberculous myelitis should be considered in most of patients in Sudan who present with features suggestive of TB of spine because early use of iv methyle prednisolone will remarkably affect the prognosis.

KEYWORDS: Tuberculosis(TB).

BACKGROUND

Transverse myelitis (TM) is a rare neurological condition in which the spinal cord is inflamed. *Transverse* implies that the inflammation extends across the entire width of the spinal cord.^[1] Pott's disease or Pott's disease is a form of tuberculosis that occurs outside the lungs whereby disease is seen in the vertebrae.^[2] Tuberculosis(TB) is a common disease in Sudan. Neurological consequences of TB are frequently encountered in our practice of neurology particularly tuberculosis of the spine(Pott's disease). Pott's disease can lead to lower limbs weakness due to predilection to involve thoracic vertebrae. Involvement of spinal cord may take several forms; compression, myelitis and ischaemic effect as a result of endarteritis obliterans. There are few case reports of tuberculous myelitis in literature.

During our practice we faced by a considerable number of cases that have been managed successfully with iv methyl prednisolone therefore we decided to start reporting such uncommon cases. Literature search we found some case reports more or less with similarity to our case. A case report from India :Tuberculous myelitis can occur as a secondary event in the course of common forms of tuberculous meningitis. It is an important and not an uncommon cause of paraparesis in Indian setting.^[3,4] Tuberculous myelitis generally occurs when

the diagnosis has been delayed and thick exudates form with spinal blocks. Occasionally, the infection may begin in the spinal area resulting in backache and involvement of the spinal cord and roots at multiple levels. In the early stages, this may be confused with other forms of viral myeloradiculopathies, but the evidence of elevated CSF protein, reduction of sugar, largely lymphocytic cellular count and presence of acid fast bacilli should confirm the diagnosis. PCR for Mycobacterium tuberculosis of the cerebrospinal fluid is a very specific test in its diagnosis. The patient should be treated with antituberculous drugs rifampicin, isoniazid, pyrazinamide, streptomycin and/or ethambutol. Use of steroids is recommended.^[5] Gouri Devi has advocated the use of intrathecal hyaluronidase, for arachnoiditis^[6], but double blind control studies are needed before this treatment can be routinely advocated. With the advent of M.R.I. identification of such lesions have become much more easier. Intramedullary. The most common central nervous system (CNS) manifestations of TB is tuberculous meningitis (95%), followed by cerebral tuberculoma and tuberculous abscess. Other infrequent manifestations are calvarial tuberculosis, tuberculous pachymeningitis (Tariq and Ahmed 2012) and spinal arachnoiditis (Naidoo et al. 1991). Intramedullary spinal tuberculosis is an uncommon presentation. There have been few case reports of intramedullary spinal tuberculosis in literature (Lin et al. 1994). Longitudinally

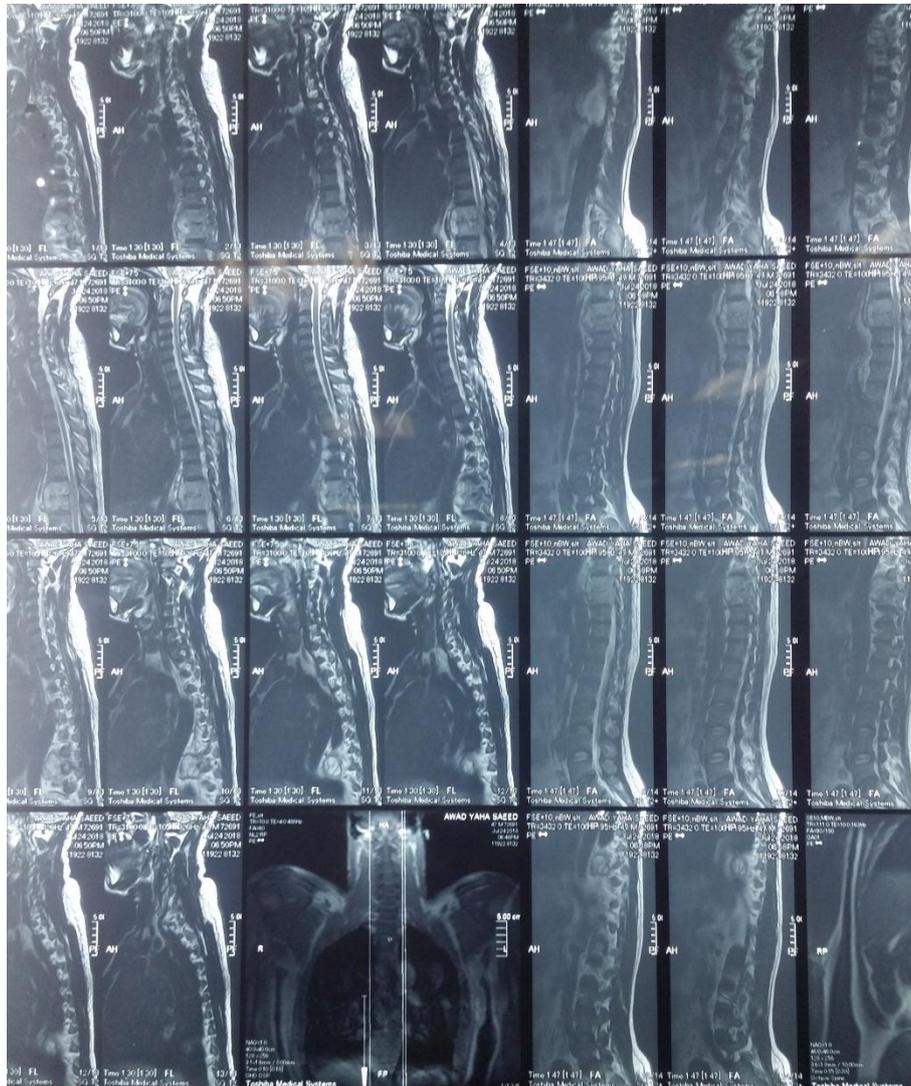
extensive transverse myelitis (LETM) is characterized by contiguous immune-mediated inflammatory lesion of spinal cord extending to three or more spinal cord segments (West 2013). Tuberculosis is a rare cause of LETM.^[5]

Case Description

A 47 year old man, farmer from eastern Sudan presented with lower limbs weakness which was gradually progressive over 20 days, the patient became completely unable to walk 8 days prior to admission. The weakness associated with lower back pain, numbness of lower limbs as well as urine retention and constipation. No headache, convulsions or loss of consciousness, no symptoms related to cranial nerve nor the upper limbs, no neck pain and no history of trauma. There was history of fever, night sweating loss of appetite. No loss of weight chronic cough. The condition is not preceded by URTI nor gastroenteritis. Not known to be diabetic, hypertensive or any chronic illness. Family history: Nothing was significant Drug history: Not on

LTM. Not known allergic to certain drug. Social history: Married with 2 kids, neither smoker nor alcohol consumer. Looked unwell, average size not pale, jaundiced or cyanosed PR: 70/min. regular, RR: 20/min, **BP::160/90**. Chest / CVS / abdomen : were normal **Neurology examination:** Conscious, fully oriented with intact memory and speech a Cranial nerves were intact including the fundus. Normal neck examination. Normal upper limbs examination. Lower limbs examination revealed hypertonia hyperreflexia power was grade 2 with impaired sensation up to D7. Planter were up going. Back examination revealed lower back tenderness, no deformities. CBC:HB 12.9g/dl TWBCs 7.8c/cm PLT 262c/cm. Blood urea 41g/dl S.Cr 1.0mg/dl S.k 4.3mmol/l.

RBG:100 gg/dl BFFM –ve LFT: normal HIV –ve HBV screening –ve HCV screening –ve ESR : 70 mm/hour PSA :2.4 PCR +ve for Tuberculosis in the CSF. Chest x-ray: Normal. Initial MRI Doral spine were shown below which was reported as :Discitis at the level D8 and D9.



Management: Methylprednisolone 1g in 500 ml normal saline once / day for 5 days followed by oral

prednisolone 60 mg daily tapered every 2 weeks according to the response. Then anti tuberculous therapy for 12 months.

Follow up: After completing the 5 days iv methylprednisolone, the patient start to walk with 2

person support(the power was grade 4).4 Weeks later he walk with one person support(the power was 4+). Follow up MRI is shown below:



DISCUSSION

In our case we match between the clinical sense and image results so we came with a preliminary diagnosis

that was infection and we came with a final diagnosis of myelitis rather than discitis alone because the later couldn't explain the weakness unless it was complicated

by abscess which is easy to be detected by MRI. On the other hand myelitis may not need high quality MRI to be shown. Despite the report of MRI which came as Discitis at the level D8 and D9, but this does not explain the paraparesis with sensory level at D7 and urine retention. So considering discitis is going more with infectious causes so we consider TB as a common problem in Sudan particularly in the Eastern states (the origin of our patient). we made a clinical diagnosis of TB myelitis and manage initially with iv methyl prednisolone according to evidence based.^[3]

CONCLUSION

Our case highlights that tuberculous myelitis should be considered in most of patients in Sudan who present with features suggestive of TB of spine because early use of iv methyl prednisolone will remarkably affect the prognosis. The clinician need to use their clinical sense in concordance with the investigations to finalize the diagnosis. Further reporting of such cases is recommended.

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