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A case of Pott's Disease in Situation of Low Health Services of Sudan

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Abstract

Patient: female -30 years old.

Final Diagnosis: Pott's Disease

Medication: Antituberculosis chemotherapy and prednisolone.

Symptoms:-Mild mid and lower back pain, and unable to walk.

Specialty: Internal Medicine.

Clinical procedure x-ray.

Objective: Diagnosis and Treatment of Pott's Disease in Situation of Low Health Services of Under developing Countries like Sudan.

Background: Pott's disease is a rare condition account for less than 1% of tuberculosis. In Sudan in 2009 estimated tuberculosis incidence was 209/100000 which gave 50000 cases and mortality rate of 12/100000 {1}.In most parts of the country essential investigations like CT scan, MRI, and PCR are not available and also neurosurgeon. Therefore the diagnosis of Pott's disease depends mainly on clinical background.

Summary of the case: A 30 year old woman originally from Eastern Sudan, where tuberculosis is endemic disease ,represented to emergency department at Sinnar Teaching Hospital with compliant of being unable to walk for one week. The weakness of the lower limbs progressed gradually over three months. There was mild mid and lower back pain. On admission she was a febrile. Lower limbs were spastic with power grade 2 and sensory level at spinal segment T 7.Right hip joint movement was restricted and painful on passive movement. She had lymphocytosis and ESR 60 mm/hour. Initial x-ray of spine revealed

osteolytic changes in adjacent vertebral bodies of T 5-6 and L4-5 and right hip joint. Chest x-ray was clear. Sputum for mycobacterium tuberculosis was negative.

She could not afford transferring to the Capital (Khartoum) and investigations like spine MRI and bone biopsy due to her financial situation.

Based on clinical diagnosis of Pott's disease and tuberculosis of right hip joint standard antituberculosis chemotherapy, prednisolone and physiotherapy were iniated. No surgical intervention was done because she unable to afford transferring to the capital and operation. Lower limbs powers improved gradually and become grade 5 after 18 months. The antituberculus chemothereby continued for 24 month

Conclusion: Pott's disease is an important differential diagnosis of paraparesis and paraplegia. History of exposure to tuberculosis and classic X radiological finding can help to make diagnosis in remote and poor community. Antituberculosis chemotherapy and prednisolone for long duration may give good outcome even without surgical intervention.

Keywords: Sinnar Teaching Hospital, Pott's diseases, Mycobacterium tuberculosis, Antituberculosis chemotherapy and Prednisolone.

Background:

Sudan is a large poor country with national income per capita of less than two thousand dollars. In 2009 estimated tuberculosis incidence was 209/100000 which gave 50000 cases and mortality rate of 12/100000 {1}.

Worldwide Pott's disease or spinal tuberculosis account for less than 1% of total tuberculosis cases. Usually occurs secondary to pulmonary infection via hematogenous route. The micobactrerial tuberculosis may spread to vertebral bodies and adjacent intervertebral disc. The spinal canal can be invaded by granulomutus tissue and abscess, leading to compression of spinal cord and later neurological complication like paraparesis and paraplegia. The most common site of infection of Pott's diseases is thoracolumber vertebra. Back pain is the most common presenting symptom. Systemic features like fever and weight loss may be present in Pott's disease, however these symptoms

are more frequent in patient with pulmonary and disseminated tuberculosis {2-3}.

Tentative diagnosis of Pott's diseases is based on clinical suspicion (history of tuberculosis and contact with tuberculous patient, positive tuberculin skin test, acid fast bacillus test, positive polymerase chain reaction for mycobacterium tuberculosis.) MRI is capable of making tentative diagnosis at early stage and remains the imaging method of choice. Finding of acid fast bacilli in respiratory specimen bone tissue or abscess will confirm diagnosis {2-4-5}.

Appropriate treatment must be started immediately on patient with high clinical suspicion before the result of any test or culture especially in remote poor area where the only investigations available are sputum for acid fast bacilli an X ray {6}.

Case report:

A 30 year old married woman originally from Eastern Sudan presented to emergency department of Sinnar Teaching Hospital with complaint of being unable to walk in February 2005. The condition started 3 months before that by mild mid and lower back pain with weakness of the lower limbs that progressed gradually until became unable to walk. She denied any history of loss of weight, trauma, sensory symptoms or sphincteric disturbance. One month before the patient was seen by orthopedic surgeon who advised her to do spinal MRI at the Capital (Khartoum). She could not afford transferring to the Capital (Khartoum) and any others costly investigations. The patient was not diabetic not hypertensive and had no significant past medical history. On admission the patient was on chair alert and oriented she was afebrile with temperature 37˚c, her blood pressure 120/80 mmHg, pulse rate 88 per min respiratory rate 18 breath per min. On physical examination there was kyphosis on the mid thoracic spine and passive movement of the right hip joint was restricted and painful. Neurological examination revealed spasticity, increase deep tendon reflexes and positive babinsk's sign in both lower limbs. There was sensory level at thoracic spinal segment 7 no other positive physical findings on physical examination.

Initial laboratory evaluation revealed; Hemoglobin 10g/dl normal range (11.5- 16.5g/dl) with relative lymphocytosis. ESR 60mm per hour. Spinal X ray revealed osteolytic changes in adjacent vertebral bodies of T5 and T6. Right hip X ray revealed osteolytic changes. Chest

X ray did not show any abnormal finding. Sputum for acid fast bacillus was negative. For financial reason the patient is unable to do further investigations like MRI, PCR or bone biopsy. Based on history of exposure to tuberculosis and X ray finding standard treatment of tuberculosis (ethambutol 1100mg daily, rifampicin 600mg daily, isoniazid 300mg daily, pyrazinamide 1600mg daily) plus Prednisolone 10mg daily for 8 weeks then 5 mg till the power of the lower limbs became grade 5,and able to walk after 18 month. Physiotherapy was started immediately with medical treatment. She improved gradually till the power of the lower limbs became grade 5 and able to walk after 18 month. The anti tuberculosis chemotherapy continued to complete 24 month. She able to enjoy normal sexual intercourse after 2 years from initiation of treatment and delivered 2 babies by cesarean section because of restricted right hip joint movement (First male on 8/2/2011 Second female on 2/6/2016)

She continued follow up till December2019 without relapse.

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