



RESEARCH ARTICLE

DISSEMINATED TUBERCULOSIS PRESENTED WITH MILLIARY TB, POTT'S SPINE AND RIGHT HEMIPARESIS - CASE REPORT

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ABSTRACT

Tuberculosis is mainly disease of lung but can affect any body organ .when two or more noncontiguous organ sites is affected called disseminated TB .This form of TB is more common in patients with low immunity. Due to high mortality among these patients early diagnosis and treatments is essential. We report a case of disseminated TB in form of milliary TB ,Pott's spine and neurologic TB. Patient was diagnosed early and put on treatment ,and showed favorably response to treatment.

INTRODUCTION

Disseminated tuberculosis (Generalized TB) is an occurrence of wide spread visceral tubercle due to haematogeneous dissemination of virulent TB bacilli from an active caseous source of infection (Slavin, 1980; Sharma, 2005). Characteristic finding is small discrete nodules, grey to reddish on cut surfaces 1-2 mm in diameter, distributed evenly throughout the affected organ. There is involvement of two or more non-contiguous organ sites, involvement of the blood or bone marrow. We report a case of disseminated TB case in which there is involvement of lung (Milliary TB), Bone (Pott's spine) and Brain (thalamic infarct) simultaneously.

Case Report

A 55 Year female presented with complaint of cough with minimal sputum, low grade fever, loss of appetite, lower back ache since 2 months and weakness in right side of the body since 1 month. There was no history of Diabetes, Hypertension and other medical illness. History of close contact with tuberculosis was present. On General physical examination pallor was present. In chest examination, bilateral crepts was present. In CNS examination, power of right upper and lower limb muscle was decreased. Vitals were within normal limits. Further Investigation Showed haemoglobin-9.5 gm%, Total

leucocytes counts- 12900 /mm³. Kidney and liver functions were normal. Lipid profile and serum electrolytes were in normal range. Serum HIV was non reactive. Sputum for AFB, Gram stain and KOH mount were negative. Mantoux test was positive (16 mm) Chest Xray showed diffuse nodular lesion consistent with milliary tuberculosis (Figure 1). NCCT DL Spine done revealed spodylodiscitis (pott's spine) involving L1-L4 vertebrae along with fragmentation of vertebral bodies and paravertebral collection, early involvement of bilateral psoas muscle (psoas abscess) (Figure 2). NCCT head showed left thalamic sub acute infarct (Figure 3). Diagnosis of milliary tuberculosis with pott's spine and left thalamic infarct was made. First line antitubercular drugs (HRZE) and steroid was started. Patient responded by treatment and his general condition improved.

DISCUSSION

Disseminated or generalized TB is Involvement of at least two non contiguous organ sites or involvement of the blood / bone marrow by tuberculosis (Wang, 2017). It is due to massive lymphohaematogenous dissemination of mycobacterium tuberculosis from a pulmonary or extra pulmonary focus and embolization to the vascular beds of various organs. Lung, liver, spleen and bone marrow are most frequently affected, other organ like bone, meninges, brain, kidney, intestine, fallopian tube, epididymus, prostate, adrenal, skin and lymphnodes may also involved.

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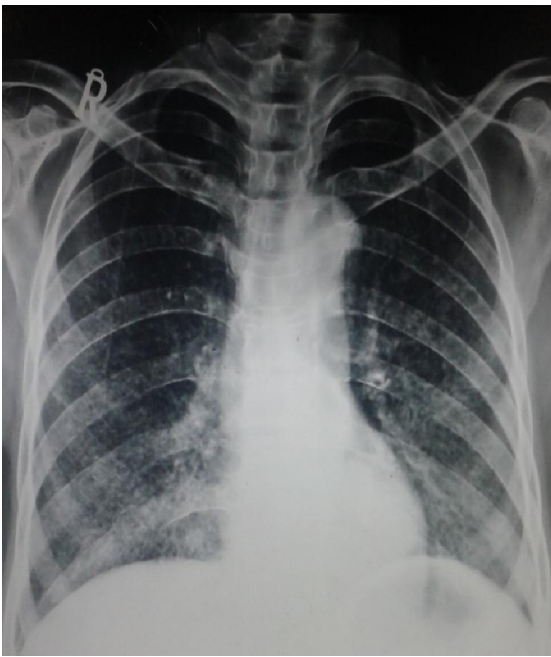


Figure 1. Chest Xray PA view showing millitary shadows

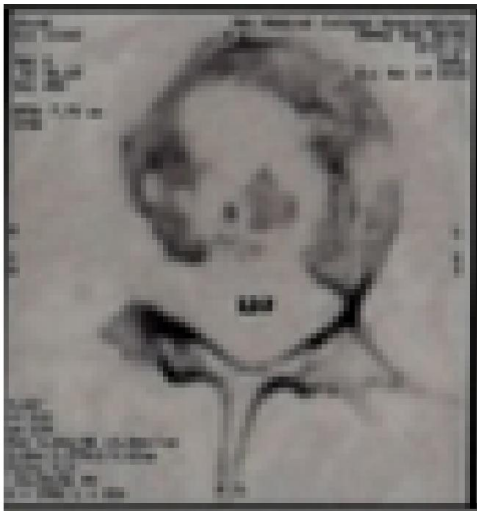


Figure 2. CT DL-Spine showing fragmentation of vertebral bodies (pott's spine)

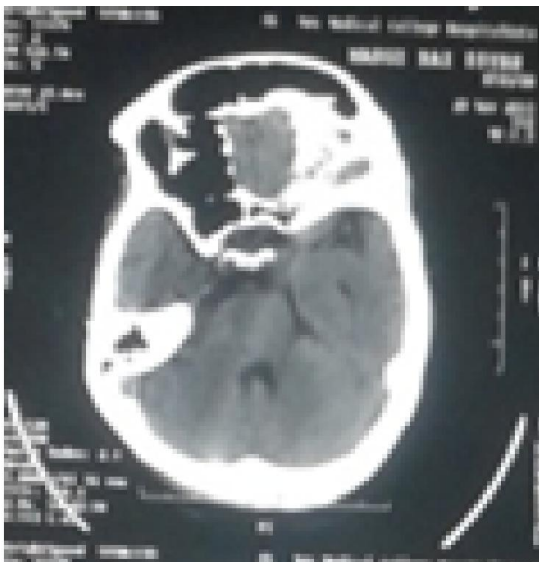


Figure 3. NCCT Head showing left thalamic infarct

Histologically millitary tubercles shows langhans giant cells with surrounding epithelioid cells. There are some predisposing Factors for generalize TB like Malnutrition, HIV, Alcoholism, Diabetes, Chronic renal failure, Corticosteroid and other immunosuppressive drugs, connective tissue disorders, Silicosis, Malignancy. Tuberculosis can affect various organs. Neurological tuberculosis constitute 0.5-10% of Extra pulmonary TB, more frequently in children (Sharma, 2004 and Tandem, 1988). There is resurgence of neurological TB across globe due to emergence of HIV infection (Glynn, 1998; Dube, 1992). It is classified into 3 categories Tubercular meningitis (TBM), Tuberculoma, and Arachnoiditis (TB rediculomyelitis). Diagnosis is made by history, neurological signs & symptoms, CSF finding, CT, MRI (Basal exudates, hydrocephalus, infarct, tuberculoma, gyral enhancement). Mainstay of treatment is ATT(6-12 months) with corticosteroid (0.75-1mg/d prednisolone). With Corticosteroid treatment, CSF abnormality and elevated pressure resolved significantly and beneficial in patient with complication of TBM, it also decrease mortality, long term neurological complications and permanent sequelae (Asbby, 1955).

Hydrocephalus, Tuberculoma, TB abscess, Arteritis causing stroke are complications of CNS tuberculosis. In Skeletal TB Spine, hip joint are mostly affected. Lower thoracic and lumbar vertebrae are most common sites. Infection begins in cancellous area of vertebral body in epiphyseal location. Vertebral body become soft and gets easily compressed and cause Wedging/total collapse. Exudates formed at lumbar vertebra enters the psoas sheath to form psoas abscess, at thoracic spine it form paravertebral abscess. Clinical features are localized pain, tenderness and paraplegia. Diagnosis is made by X-ray Spine (disc space narrowing), CT/MRI of spine. Treatment is Antitubercular drugs and surgery (For progressive bony lesion, failure to respond to ATT). Millitary TB of lungs is due to massive haematogenous dissemination of tubercle bacillus (from Primary/reactivation of latent focus). Tiny discrete foci usually size of millet seeds (1-2mm) more or less uniformly distributed in the lungs. Diagnosis is done by Chest X-ray (1-3 mm well defined nodules distributed uniformly throughout), HRCT, PFT (restrictive pattern) sputum for AFB, Tuberculin Skin Test, and Histopathological demonstration of granuloma. ATT and corticosteroid is mainstay of treatment.

Conclusion

Disseminated form of tuberculosis involves many body parts like lungs, central nervous system, skeletal system and other. CNS infarct is one of the complication. Disseminated tuberculosis should early diagnose and treated to avoid complications. Cases that left untreated become fatal within one year (Sahn, 1997). Pott's spine is one of the reasons for chronic back ache in tuberculosis patients.

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