



## Extra-Pulmonary Multidrug Resistant Tuberculosis (MDR-TB) Presenting As Psoas Abscess: A Rare Case Report

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### Abstract

**Introduction:** MDR TB usually occurs in anti tubercular treatment defaulters or those with history of contact to MDR TB. But rarely it may occur as a primary case in persons without history of ATT or contact to TB patients.

**Case Report:** A female presented in our hospital with complains of pain in right leg and fever on and off since last 2 months.

**O/E:** The patient had a swelling in right leg of size 30×15×25 mm which was tender, non-pulsatile and oval in shape. She had no history of tuberculosis or contact to tuberculosis in past. Chest xray, sputum examination and CECT Thorax were normal. Montoux test was positive (50mm). So, patient was started on category 1 ATT empirically.

USG Abdomen and CECT Abdomen confirmed right psoas abscess, for which pus was drained multiple times and was sent for LPA examination in which resistance to isoniazid and rifampicin was detected. Then she was started on 2nd line ATT including kanamycin, pyrazinamide, ethionamide, ethambutol, cycloserine, and levofloxacin as per weight bands. On starting ATT, her general condition improved and she was discharged on 2nd line ATT.

**Discussion:** Psoas (or ilio-psoas) abscess is collection of pus in the ilio-psoas muscle compartment. It may arise via contiguous spread from adjacent structures or by the haematogenous route from distant site. USG or CECT Abdomen allow good accuracy for early diagnosis.

**Conclusion:** Extra-pulmonary MDR TB without history of ATT or contact to MDR-TB is rare. High clinical suspicion and gene xpert test may be the key for early and accurate diagnosis of the patient.

### Introduction

Multi Drug Resistant Tuberculosis (MDR-TB) is a strain of Mycobacterium tuberculosis resistant to first line anti-tubercular drugs, at least isoniazid and rifampicin. Multi Drug Resistant Tuberculosis usually occurs in anti- tubercular treatment (ATT)

defaulters or those with history of contact to MDR-TB. It occurs very rarely as a primary case in persons without history of ATT or contact to TB patients. In the year 2013, the WHO estimated the prevalence of primary MDR-TB in India around 3.5%; however, this prevalence is 20.5%

among previously treated cases<sup>[1]</sup>. Tubercular myositis of psoas muscle is considered as a very rare manifestation of extra-pulmonary tuberculosis. Till date only one case of extra-pulmonary MDR-TB in Psoas muscle has been reported in literature by Sayes et al.<sup>[2]</sup>

We report a case of a young female with psoas abscess caused by multidrug resistant tuberculosis. This case assumes significance as the psoas abscess is caused by multidrug resistant tubercle bacilli with no associated involvement of lung parenchyma and adjacent bony structures. This report also stresses the need for culture and drug sensitivity testing in every case of extrapulmonary tuberculosis along with histopathological investigation.

### Case Report

A 30 years old female presented in our hospital with complaints of pain in right thigh on lateral side since last 2 months. She also complained of

fever on and off since last 2 months. The patient did not have any other respiratory complaints. Patient had no history of tuberculosis or any contact to tuberculosis patient. Family history was not significant. On examination, she patient was conscious and oriented to time, place and person. She was afebrile, and her general physical examination was normal with pulse rate of 88/min, B.P 116/78 mm of Hg, respiratory rate 16/min and saturation of 99% on room air. Chest auscultation did not reveal any abnormality.

Patient had a swelling in right thigh of size 30×15×25 mm on lateral aspect which was tender, progressive, non-pulsatile, oval in shape with no overlying skin changes. Chest x ray (Fig 1), sputum examination for acid fast bacilli and CECT Thorax were normal. Her viral markers for HIV, HBsAg, HCV were negative. Montoux test was positive (50mm × 30mm). So, patient was started on category 1 ATT empirically.

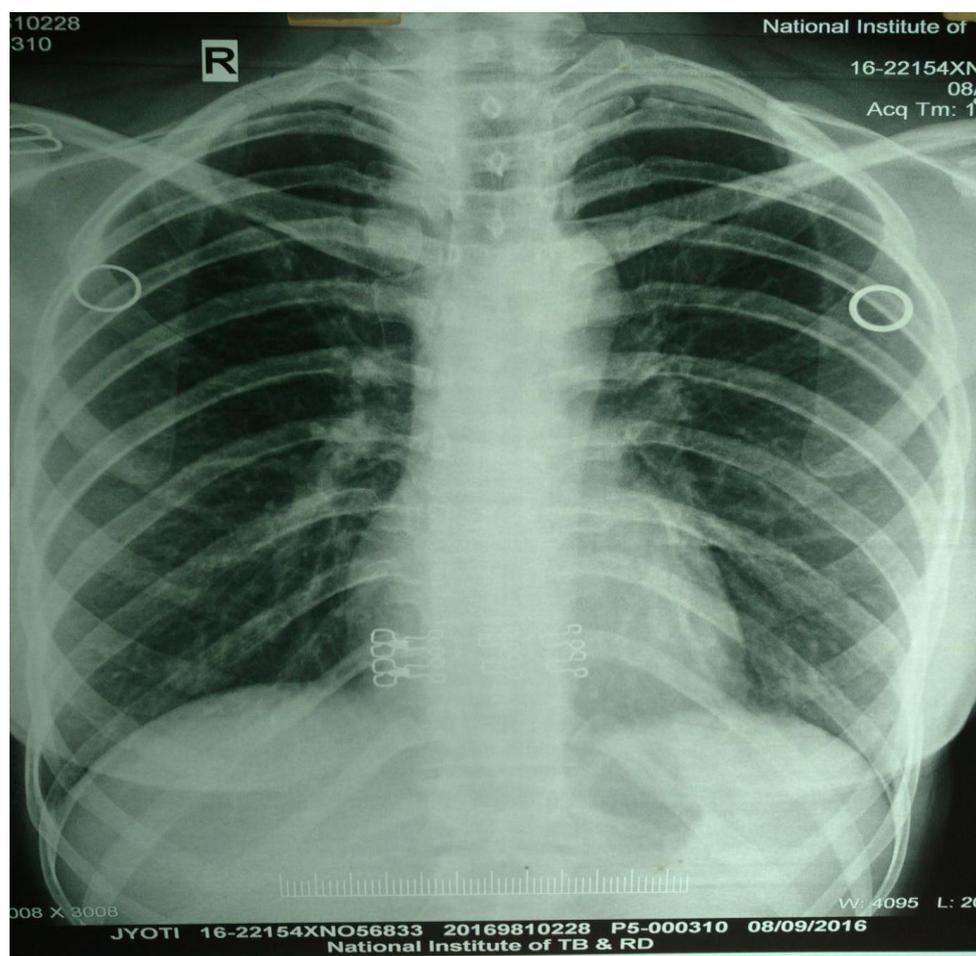


Fig. 1- chest x-ray PA view showing no abnormality.

USG Abdomen & pelvis showed a hetero-echoic area measuring 30×15×25mm noted in right ilio-psoas muscle suggestive of abscess with surrounding inflammation of mesentery & omentum & reactive mesenteric lymph nodes. CECT Abdomen (Fig. 2) confirmed right psoas abscess, for which pus was drained and sent for Line Probe Assay (LPA) examination in which

resistance to isoniazid and rifampicin was detected. Thus the diagnosis of multidrug resistant tuberculosis (MDRTB) causing psoas abscess was made. She was started on 2nd line anti-TB drugs in accordance with the National Program for TB control in India. Her general condition improved and she was discharged on 2<sup>nd</sup> line ATT.



**Fig. 2-** CECT Abdomen showing bulky right psoas muscle with a peripherally enhanced loculated collection extending till right inguinal region shown by black arrow.

#### Discussion:

Extra pulmonary Tuberculosis accounts for roughly 15% of Tuberculosis (TB) cases among immunocompetent hosts and for 50-70% of cases of TB occurring in immunocompromised,

especially in persons with HIV. MDRTB is a strain of Mycobacterium tuberculosis resistant to first line anti-tubercular drugs, at least isoniazid and rifampicin.

Primary extra-pulmonary MDR-TB is an uncommon form of the disease, even in the immunocompromised patients, and it requires a great deal of suspicion to diagnose such a case.

Pulmonary tuberculosis due to MDRTB is a serious public health concern and is one of the reasons that hamper tuberculosis eradication. According to World Health Organization (WHO) in 2010, there were around 650,000 cases of MDR-TB among the world's 12 million prevalent cases of TB. In India, MDRTB accounts for 3.5 % and 20.5% of the newly detected smear positive tuberculosis and retreatment TB cases respectively.<sup>(1)</sup>

Among immunocompetent persons, extra pulmonary presentation of MDR-TB is rarer, although there are some case reports of extrapulmonary MDR-TB involving lymph node,<sup>[3]</sup> peritoneum,<sup>[4]</sup> meninges,<sup>[5]</sup> spine,<sup>[6]</sup> etc.

Sayes et al<sup>[2]</sup> reported a case of MDRTB in psoas muscle but that patient had history of category 1 ATT and presence of MDRTB in her mother. But our case is unique in that she had no history of TB/ATT or contact to a TB patient without any identifiable source of infection and immunodeficiency.

The emergence of 'Extra-pulmonary drug resistant TB', in otherwise normal patients without any respiratory problems, highlights the fact that we still have much to learn about this killer disease.

### Conclusion

Extra-pulmonary MDR TB without pulmonary involvement and without any history of ATT or contact to MDR-TB patient is rare. High index of clinical suspicion along with molecular testing may be the key for early and accurate diagnosis of the patient.

### References

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