**Case Report**

**Case Report on Multicentric Tuberculosis - A Rare Presentation**

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**Abstract**

Tuberculosis is a multi systemic disease with myriad presentation and manifestations, though pulmonary tuberculosis is the most common presentation, extra pulmonary tuberculosis involving other organs of the body is often seen. Individuals with poor nourishment and low immune status are especially susceptible for disseminated and multicentric tuberculosis. we report a case of multicentric tuberculosis which is a rare presentation in a 56yrs old female presented with abdominal pain and abdominal distension.

**Keywords:** Multicentric tuberculosis, Abdominal tuberculosis, hepatic and splenic tuberculosis.

**Introduction**

Tuberculosis is still a very common disease in developing countries. Pulmonary tuberculosis is commonest form of tuberculosis but patients may present with lesions in location not involving the lungs. Immuno competent individuals are more susceptible for multi centric tuberculosis. Extra pulmonary tuberculosis may involve abdominal organs, skeletal system, lymph nodes.

Abdominal tuberculosis {TB} is an uncommon form of infection with mycobacterium tuberculosis. Abdominal tuberculosis is defined as infection of the gastrointestinal tract, peritoneum, abdominal solid organs, and or abdominal lymphatics with mycobacterium tuberculosis[11].

Abdominal TB constitute approximately 12% of extrapulmonary tuberculosis cases and 1%to3% of total TB cases. Abdominal TB is one of the most common form of extra pulmonary TB. Abdominal TB is relatively rare but it is recognized that abdominal TB is increasing in both developing and developed countries.

**Case Report**

This is a case report of 56yr old female, known diabetic, thinly built, presented with complaints of Pain abdomen since 6months, fever since 7 days. The patient had no history of pulmonary or pleural disease. Pain abdomen is present in right hypochondriac and left hypochondriac regions,
sharp pain non radiating in nature. Fever was high graded in nature, intermittent and aggravated in the evening. History of weight loss, decrease in appetite nausea and bloating was noted. Not associated with vomiting, melena, chills altered bowel habits, cough, shortness of breath, hemoptysis and chest pain.

Upon physical examination, her vitals were stable the patient was thinly built and on palpation liver and spleen were enlarged. Upon investigation usg showed hepatomegaly and mild splenomegaly. A plain radiograph of the chest did not show any abnormality. MRI showed hepatomegaly with multiple irregular ill defined altered signal intensity areas noted, mild splenomegaly, multiple t2 hypointense altered signal intensity areas noted in spleen. Sub centric aorto caval and peri gastric nodes. Small altered signal intensity lesion in midpole of right kidney showing diffuse restriction. Multiple enlarge periportal portal and peripancreatic nodes. PET CT reveals multiple metabolically active hypoenhancing lesions in both lobes of liver, hypoenhancing lesions in spleen and multiple small lymph nodes present.

- on further investigation- USG guided liver biopsy report show liver parenchyma coalescent granuloma with areas of necrosis and langhans type giant cells consistent with granulomatous inflammation of kochs etiology. A diagnosis of multicentric tuberculosis is established, based on histopathology.

**HISTOPATHOLOGY REPORT**

**HISTORY:**
- Pain abdomen – 6 months.
- Loss of appetite and weight.
- PET-CT – FDG avid hepatic and splenic lesions; medaistinal and abdominal nodes; naso and oropharyngeal uptake; mildly avid intra-parotid and bilateral level II cervical nodes.

**SPECIMEN:**
- U/S Guided Biopsy – Liver lesion.

**GROSS:**
- Received four linear grey white to grey brown soft tissues ranging from 0.2 – 1.5 cm.
- Entire tissue is processed – A,B.

**MICROSCOPIC EXAMINATION:**
- Sections show liver parenchyma with coalescent granulomas with areas to necrosis and langhan's giant cells. There is no evidence of any atypical cells.
- Special stain for AFB: Non-Contributory.

**IMPRESSION:**
- CONSISTENT WITH GRANULOMATOUS INFLAMMATION MAY BE OF KOCH'S ETIOLOG

***End of report***
The patient was started on Anti TB therapy and it was supplemented with pyridoxine 10mg a day. The patient showed progressive improvement within 1 month of starting the therapy and the patient was on follow up.

Discussion
Multi centric tuberculosis is usually seen in immunocompromise patients, other predisposing factors are intravenous drug use, diabetes mellitus, alcohol abuse and hepatic cirrhosis\(^1\, ^3\). TB can occur in virtually any abdominal structure. The incidence of abdominal TB is estimated to be 3-4% of the total extra pulmonary TB \(^12\, ^4\). It occurs by hematogenous or contiguous spread from other organs or by reactivation of latent TB. Less commonly ingeston of unpasteurized milk containing tubercle bacilli. Extra pulmonary tuberculosis may involve skeletal system, abdominal structures, lymph nodes. As in our case there was involvement of liver, spleen, kidney, lymph nodes hence it may be called as multi centric tuberculosis. Weight bearing joints involved in extra pulmonary tuberculosis are the spine, hip, and knees in the order of decreasing frequency\(^10\). Splenic tuberculosis is extremely rare and has no characteristic symptoms or abnormal imaging findings. Therefore it is likely to be misdiagnosed as carcinoma of spleen,
splenic abscess, lymphoma, rheumatic fever or others. Isolated splenic tuberculosis is rare although secondary involvement in military TB is common\(^\text{2,9}\). Hepatic tuberculosis has many faces and the imaging manifestation can show considerable overlap with other relatively more frequent primary or secondary lesions of the liver. The most common symptoms were fever, abdominal pain and weight loss. Elevation of alkaline phosphatase and gamma glutamyl transfrase was prominent. Lesions can produce mass effect leading to cholestatic jaundice. Spleen and kidney involvement is seen in multicentric TB which is a rare presentations. The diagnosis is established by imaging and microscopic or molecular detection of the pathogen. Although ultrasound may suffice in some cases, a contrast enhanced ct scan is the ideal investigation. It can delineate all the lesions. MRI and PET CT can also be useful in these cases\(^7\). USG guided biopsy helps in confirmation of abdominal TB. Histopathology can reveal the characteristic caseating granulomatous. Nucleic acid amplification by polymerase chain reaction can give confirmatory diagnosis within hours. All the above mentioned tests carry variable sensitivity and in the event of failure to demonstrate the tubercle bacilli, the final diagnosis can still be arrived at by careful consideration of the demographics, clinical and radiologic features and response to treatment as as done in the case under consideration. The sensitivity of AFB smears obtained from liver tissue has been found to be only 25%. Caseating granulomas are seen in 68% of the cases whereas highest diagnostic sensitivity of 86% is seen with PCR. The general consensus on treatment is a six month course of ATT. The initial two months comprise of the intensive phase with isoniazid, rifampicin, pyrazinamide and ethambutol. For the remaining period isoniazid rifampicin and ethambutol are given. Drug resistance is an emerging problem and it can necessitate the use of more toxic alternative drugs and duration of therapy is also extended.

**Conclusion**

To conclude a diagnosis of multicentric tuberculosis should be kept in mind in case of patients with atypical presentations in unusual locations with constitutional symptoms in endemic areas especially among undernourished and among those living in poor conditions. Imaging modalities should be supplemented with fine needle aspiration or open biopsy to confirm the diagnosis. Timely diagnosis and treatment will prevent further complications. The role of proper multidrug antitubercular therapy needs to be emphasized as tuberculosis can be very well managed with medications.

**References**

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