



Splenic Tuberculosis – A Rare Case Report

Authors

**Dr Thiyam Brojendro Singh, Dr Jafar Niyas, Dr Laikangbam Subhalaxmi,
Dr Karam Romeo Singh, Dr Santosh Kumar Singh, Dr Th Bhimo Singh**

Corresponding Author

Jafar Niyas

Department of Medicine, Regional Institute of Medical Sciences, Lamphelpat,
Imphal West, Manipur, India

ABSTRACT

Involvement of spleen in tuberculosis mostly occurs as a part of miliary tuberculosis especially in immunocompromised individuals. It is extremely rare in the immunocompetent patients and only few cases reported internationally. Here we are reporting a rare case of 35 year old immunocompetent female who presented with evening rise of temperature, decreased appetite & loss of weight for the last 3 months and recurrent pain in left hypochondrium for one month. On evaluation found to have elevated ESR with a strongly positive mantoux test and multiple hypo echoic lesions in the spleen on ultrasound abdomen. Contrast enhanced computed tomography showed multiple hypodense lesions with significant wall enhancement in the spleen. Fine needle aspiration cytology showed focal areas of caseous necrosis with acid fast bacilli in Ziehl-Neelsen stain and the diagnosis of tuberculosis of spleen is confirmed. No primary focus of infection detected in the lungs or any other organs.

Keywords: tuberculosis, spleen, immunocompetent.

INTRODUCTION

There are only few cases of splenic tuberculosis reported internationally in literature. Splenic TB is extremely rare in immunocompetent individuals and has no characteristic symptoms although secondary involvement in miliary TB is common especially in immunocompromised persons. The misdiagnosis rate is also high if there is no tuberculosis history in other organs. Here we are reporting a rare case of splenic tuberculosis in an immunocompetent individual.

CASE REPORT

A 35 year old woman presented with evening rise of temperature, decreased appetite & loss of weight for the last 3 months and recurrent pain in left hypochondrium for one month duration. History of contact with an open case of Tb from the neighbour was there. There was no history of use of immunosuppressants, organ transplant or prior chemotherapy.

Physical examination revealed a moderately build and poorly nourished lady weighing 38 Kg, anemic, febrile with no hepato splenomegally on

palpation. Systemic examination revealed no significant abnormality.

Routine blood analysis showed haemoglobin - 9.7mg% with total leucocytes count 5700 (Polymorphs 71%, Lymphocytes 24%, Monocytes 03%, Eosinophils 05 & Basophils 0%) and an elevated erythrocyte sedimentation rate of 115 mm/1hour. Peripheral smear showed normocytic hypochromic picture with adequate number of platelets. Other routine biochemical parameters including blood sugar, liver and kidney function tests, urine microscopy and culture, thyroid function tests were within normal limits. ELISA test for HIV, hepatitis B and hepatitis C screenings were negative.

Abdominal ultrasound revealed a normal sized spleen with multiple hypoechoic lesions largest measuring 4cm x 3.6 cm. Other abdominal organs showed no significant abnormality in ultrasound.



Figure 1: Ultrasound picture of spleen showing multiple hypodense lesions.

Mantoux test showed a strongly positive induration of 35mm X 30mm in diameter.



Figure 2: Photograph showing a strongly positive mantoux of 35x30mm induration.

Chest X-ray showed no significant abnormality. Contrast enhanced computed tomography revealed multiple hypodense lesions in the spleen, largest measuring 2.7 cm in the middle portion with small satellite lesions. There was a large subcapsular lesion of 5cm x 2 cm in axial dimension. Post contrast images showed significant wall enhancement of the lesion. Liver, kidneys, visualised bowel loops and pelvic organs were within normal limit and there was no free fluid in the peritoneum.

Ultrasound guided fine needle aspiration cytology showed scattered mixed inflammatory cells with focal areas of caseous necrosis and acid fast bacilli in Ziehl–Neelsen stain

On further evaluation there was no other primary foci of tuberculosis in lungs or any other organs . Anti tubercular therapy with four drug regimen was started and she is responding well to the treatment, afebrile and is on follow up.



Figure 3: CECT abdomen showing hypodense lesions in the spleen with small satellite lesions



Figure 4: Coronal view CECT abdomen from the same patient showing hypodense lesions in the spleen.

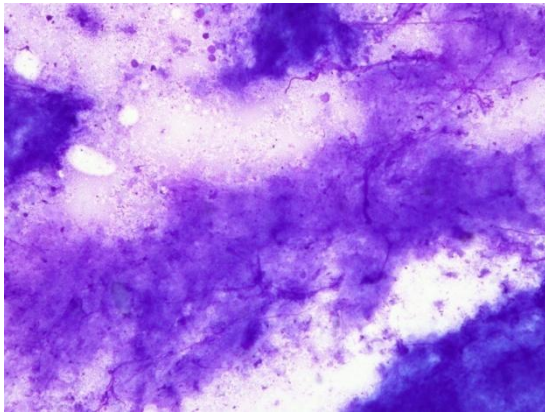


Figure 5: Needle aspiration cytology of spleen showing caseous necrosis

DISCUSSION

Lung is the major site of involvement of tuberculosis. The extrapulmonary tuberculosis involves 11-16% of all patients of tuberculosis out of which 3 to 4% belong to abdominal tuberculosis.¹ Involvement of spleen in tuberculosis usually develops as a result of dissemination of advanced pulmonary or miliary tuberculosis. This is seen usually in immunocompromised individuals like human immunodeficiency virus infection, chronic debilitating diseases or malignancies.² Rarely spleen can be infected through the ingestion of contaminated food or sputum, or by dissemination via portal vein.

Primary involvement of tuberculosis is extremely rare in immunocompetent individuals. Most common presentations are low grade fever, fatigue, weight loss and splenomegaly.^{3,4,6}

Majority of the cases of splenic tuberculosis is micronodular and is usually associated with involvement of liver also. Macro nodular involvement is extremely rare and it is more frequent associated HIV infected patients with a rate around 15%.¹²

On ultrasonography micronodular lesions usually seen as diffuse hyperechoic lesions except in cases of necrotising lesions. In computed tomography these lesions typically appear as multiple rounded hypodense lesions with a diameter of 1-2 cm.⁵

In the differential diagnosis of solitary spleen lesions splenic cysts, hemangiomas, hamartomas, pyogenic, amoebic, fungal or tubercular abscess, primary malignancies like lymphoma or

metastatic tumors should be considered.⁴ In a suspected cases of splenic lesions ultrasound is the first imaging of choice as it is cheap and reliable.⁷ On the other hand contrast enhanced CT is ideal for establishing the extent of the disease and for evaluating the complications. An ultrasound guided needle aspiration usually reveals a positive results for diagnosis.⁸ The reported yield of aspiration cytology from the splenic lesions is variable. Suri et al reported up to 88% sensitivity for fine needle aspiration cytology.⁹

However a definite diagnosis of splenic Tb may require a splenectomy and histopathological examination.¹⁰

Most of the cases of primary splenic Tb can be managed medically with anti tubercular therapy alone and may require long term treatment especially in immunocompromised patients.^{11\}

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