Original Research Paper

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Pulmonary Medicine

SPLENIC TUBERCULOSIS AS AN UNCOMMON INITIAL PRESENTATION OF DISSEMINATED TUBERCULOSIS – A CASE REPORT

Handral Vaishnavi	Department of Pulmonary Medicine, Dr. D Y Patil Hospital and Research Institute.
Mirchandani Lavina	Department of Pulmonary Medicine, Dr. D Y Patil Hospital and Research Institute.
Nair Girija	Department of Pulmonary Medicine, Dr. D Y Patil Hospital and Research Institute.
Patel Shahid	Department of Pulmonary Medicine, Dr. D Y Patil Hospital and Research Institute.
Sarangdhar Nikhil	Department of Pulmonary Medicine, Dr. D Y Patil Hospital and Research Institute.

ABSTRACT Splenic involvement in tuberculosis is extremely rare, especially in immunocompetent patients (1). It can present only as pyrexia of unknown origin (PUO) and therefore a high degree of clinical awareness is required to diagnose this condition. We report a young patient who presented with constitutional symptoms since about a year. However ultrasonography (USG) and computed tomography (CT) revealed a massive splenomegaly with few ill-defined mesenteric lymphnodes. Splenectomy was done and histopathological report revealed necrotizing granulomatous inflammation involving the spleen, peritoneum and the liver along with positive acid-fast staining. A definitive diagnosis of tuberculosis was therefore established and patient received antitubercular treatment (ATT). After two weeks patient developed a massive left pleural effusion on ATT. USG guided therapeutic thoracocentesis revealed exudative effusion as per Lights criteria with Adenosine deaminase level of 119.8units/ml. ATT was continued with the same regimen and after six months of treatment, the patient's symptoms significantly improved.

KEYWORDS :

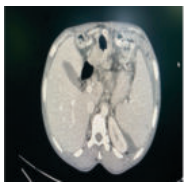
INTRODUCTION

The burden of Tuberculosis (TB) in endemic areas like India is well-known. ExtraPulmonary Tuberculosis (EPTB) unmasks different routes of spread such as hematogenous spread. Uncommon site of involvement such as spleen as in our case poses a diagnostic challenge but strong clinicoradiological suspicion is adequate to initiate ATT.

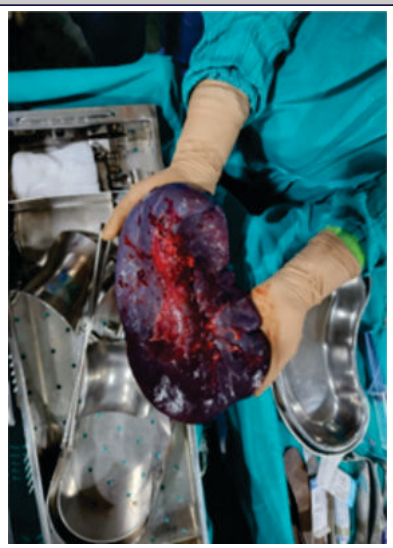
Case Report

25-year-old male, vegetable vender by occupation, was referred for history of fever with chills and night sweats on and off, loss of weight, loss of appetite since a year. There was no history of cough, chest pain, hemoptysis, breathlessness, pain in abdomen, hematuria or past history of TB or TB contact. He had no comorbidities. He was thinly built, moderately nourished, febrile (99 degrees F) pulse rate- 110/min, bloodpressure-120/70mmhg, 99% saturation on room air.

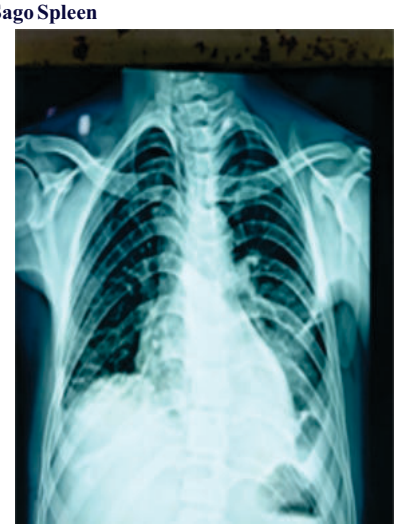
Abdominal examination revealed non tender and firm splenomegaly extending beyond the umbilicus(15cm), not associated with hepatomegaly or ascites. Blood tests revealed anemia with pancytopenia. Tests for febrile tropical infections like dengue, malaria, and kala azar were negative. Chest xray was normal. USG abdomen revealed splenomegaly of 16.6cm, with multiple scattered well defined hypoechoic lesions of variable sizes. CT abdomen revealed splenomegaly of 21cm, with multiple non necrotic lymph nodes in bilateral paracolic gutters. Patient was advised splenectomy by surgery department. Intraoperatively tissue showed sago spleen like appearance. Histopathological report suggested granulomatous necrotizing inflammation. Ziehl-Nielsen staining of this tissue showed pink rods confirming acid fast bacilli. Hence diagnosis of splenic TB was confirmed and he was started on drug sensitive regimen consisting of Isoniazid(H), Rifampicin(R), Pyrazinamide(Z), ethambutol(E) under national tuberculosis elimination programme. Two weeks after splenectomy patient was referred to the respiratory department for chest radiograph findings which revealed left sided massive pleural effusion. USG guided thoracocentesis was performed and 600ml straw colored fluid was aspirated. Fluid analysis revealed a lymphocyte predominant, exudative effusion with pleural fluid protein of 6.6mg/dl and elevated Adenosine deaminase levels of 119.8 Units/ml suggestive of tubercular etiology. Patient was continued on the same ATT and six months later there is significant clinical and radiological improvement.



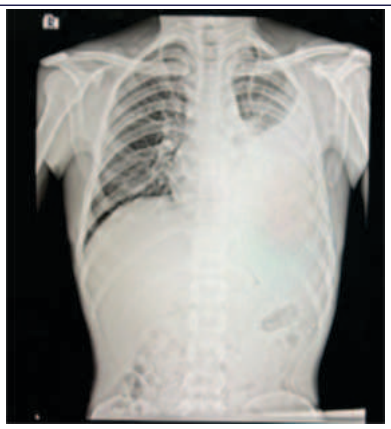
CT Abdomen Showing Splenomegaly



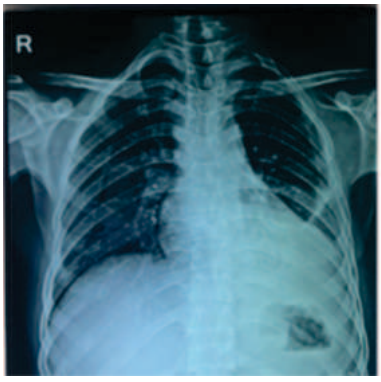
Intra-op Sago Spleen



Pre-op CXR



Post-op Left Sided Pleural Effusion, Pretap



Post Tap CXR

DISCUSSION

The burden of EPTB in Human immunodeficiency virus (HIV) negative population is 15%-20% and in HIV positive patients it is-40%-50% of new TB patients[2]. Common EPTB sites are lymph nodes, abdominal, bone, skin. Splenic TB is rare. Patient can be asymptomatic or can present with PUO, constitutional symptoms, pain in abdomen, isolated splenomegaly, bleeding tendencies, splenic abscess. On imaging, there can be abscesses, calcifications, hypoechoic lesions and isolated splenomegaly[3]. Common gross appearance of spleen in TB includes nodules, calcifications, miliary, abscesses or mixed variety[4].

Our patient presented as PUO, loss of weight, loss of appetite and splenomegaly. TB diagnosis was confirmed by histopathological report which revealed granulomatous necrotizing inflammation with positive acid-fast bacilli. Two weeks after ATT, patient developed exudative pleural effusion. He was continued on same treatment and showed improvement in six months.

Splenic TB is extremely rare and most frequently seen in immunocompromised patients. Disseminated tb refers to concurrent involvement of at least 2 non contiguous organ sites or involvement of blood or bone marrow by tb process [5]. We suspect intraoperative dissemination, hematogenous route of spread or immunosuppression following splenectomy to be some of the reasons for development of pleural TB.

CONCLUSION

In Splenic TB patient usually presents with indeterminate symptoms such as fever. High index of clinical suspicion is required to investigate and diagnose such patients. A confirmatory diagnosis is difficult as stain and cultures are usually negative and the diagnosis has to be made on the basis of clinico-radiological correlation. This problem of diagnostic, followed by treatment delay is compounded in TB-endemic countries like India. High index of suspicion combined with skilled aspiration of lesion, pathological and molecular diagnosis helps to preserve the organ. Disseminated tuberculosis most commonly occurs due to hematogenous spread from an endogenous focus of infection either due to reactivation of latent tb foci or due to a state of immunosuppression. Splenic TB as initial presentation of disseminated tuberculosis is uncommon, if involved raises suspicion of disseminated TB. Antitubercular therapy should be initiated at the earliest if diagnosis confirmed. However strong clinical suspicion is adequate to start empirical anti tubercular treatment.

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