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Clinical Group

Global Journal of Medical and Clinical Case Reports

ISSN: 2455-5282 DOI CC By

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Dates: Received: 15 June, 2017; **Accepted:** 23 June, 2017; **Published:** 24 June, 2017

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Case Report

Splenic Tuberculosis - A Rare Case Report

Abstract

Splenic tuberculosis (splenic TB) is extremely rare. It is likely to be misdiagnosed as carcinoma of spleen, splenic abscess, lymphoma, or others. The misdiagnosis rate is high if there is no tuberculosis history in other organs. We came across a case of 27 years old immunocompetent female from good socioeconomic background who presented with weight loss and pain in left hypochondriac region. Ultrasonography of abdomen revealed multiple hypo echoic lesions in the spleen. MRI chest and abdomen revealed multiple splenic focal lesions with no contrast enhancement and well defined mass in the posterior mediastinum. Splenectomy was performed and sample was sent for histopathological examination and also microbiological analysis. Microscopic examination revealed splenic tissue with multiple variable sized granulomas showing epithelial cells, lymphocytes and Langhan's giant cells, the larger one showed wide necrosis with nuclear debris and suppuration together with focal increase in plasma cells. This was consistent with the diagnosis of Mycobacterial infection with MRI finding of only mediastinal lymph node involvement in the lungs.

Introduction

Extra pulmonary tuberculosis accounts for almost 15% of all cases of tuberculosis. Among extra pulmonary form, splenic tuberculosis is exceptionally rare clinical condition. This form of tuberculosis is normally seen as a part of miliary tuberculosis and is rarely the isolated entity or presenting feature. Here we are reporting ting a case of splenic tuberculosis as a main presenting manifestation

Case Report

Immunocompetent non diabetic 27 years old female , married with no offspring complained of left hypochondrial pain radiating to the shoulder with no relation to meals associated with fever , anorexia and weight loss of few weeks duration , no vomiting or alternation of bowel habits and no abdominal distension . On examination she was pale and afebrile. Abdomen examination revealed mildly enlarged, tender palpable spleen. Laboratory data showed that her red blood cell count was within normal limits, erythrocytic sedimentation rate (ESR) was 55 mm/h, CRP 58 , blood culture was negative , HIV antibody reaction were negative . Chest radiography revealed no abnormalities. Cardiac ultrasound showed mitral valve prolapse. Ultra sound of abdomen revealed multiple hypo-echoic lesions in an enlarged spleen, while MRI chest and abdomen scan (Figures 1,2) showed multiple iso-intense lesions on T1 and high on T2 with no contrast enhancement and a well-defined mass at posterior mediastinum 43 x 20 mm (finding suggestive of lymphoma for biopsy). Fine needle aspiration of one of the splenic focal lesions revealed pus with negative culture and negative staining for AFB. On the basis of these findings splenic abscess was the provisional diagnosis and splenectomy was carried out. On gross examination of specimen showed nodular surface and on dissection revealed

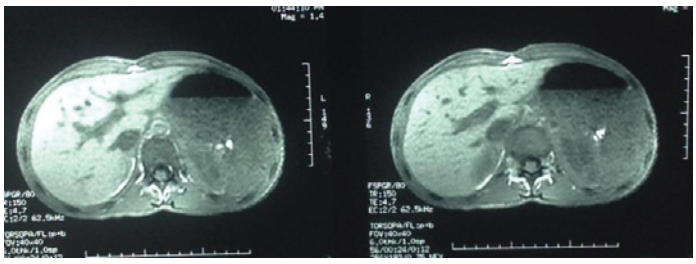

Figure 1: MRI abdomen showing enlarged spleen with focal area.

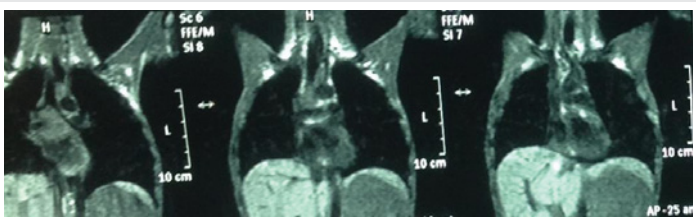

Figure 2: MRI chest shows mediastinal lymph node enlargement with no parenchymal involvement.

Citation: Amin Soliman MA (2017) Splenic Tuberculosis - A Rare Case Report. Glob J Medical Clin Case Rep 4(3): 072-073.
DOI: http://doi.org/10.17352/2455-5282.000052

multiple cavities filled with grayish yellow thick fluid " pus " ranging in size between 0.5 up to 2.5 mm in maximal dimensions . Microscopic examination revealed splenic tissue with multiple variable sized granulomas showing epithelial cells, lymphocytes and Langhan's giant cells, the larger one showed wide necrosis with nuclear debris and suppuration together with focal increase in plasma cells. Surrounding splenic parenchyma was within normal limits. However acid fast staining of section did not show presence of acid-fast bacilli

Therefore, a final diagnosis of splenic tuberculosis was made, and the patient was started on quadruple anti-TB therapy (INH, rifampicin, pyrazinamide and ethambutol) for two months followed by dual drugs (INH and rifampicin) for 4 months with improvement of the general condition of the patient.

Discussion

Tuberculosis is a multi-system disease, 90% of which locates primarily in lung, whereas isolated splenic tuberculosis, as we present here, is a rare form of extrapulmonary TB. Many reported cases of splenic tubercular abscess are found to have underlying HIV infection also [1,2]. Splenic involvement was thought to be seen only in immunocompromised stage. However, there are sporadic case reports of splenic tuberculosis, mainly the splenic abscess where patient is immunocompetent [3]. Adil A et al [4], reported a series of 10 immunocompetent individuals with splenic tuberculosis. All of them had at least one site or organ affected by tuberculous infection. The common presenting clinical features are pyrexia of unknown origin and thrombocytopenia. Rarely, it has also been diagnosed incidentally during laparotomy that was carried out for abdominal trauma [5].

Diagnosis of isolated splenic tuberculosis is difficult and often delayed because of vague clinical manifestations. In almost all the reported cases diagnosis was made by radiologic examination followed by pathologic examination of fine needle aspiration, splenic biopsy or of splenectomy specimen. In our case ultrasound examination revealed hypoechoic lesions while MRI scan demonstrated iso-intense lesions on T1 and high on T2 scan in the spleen. However similar radiological picture is also seen in patients having fungal infection or malignancy. Radiology cannot pinpoint the underlying etiology. Therefore histopathological examination is necessary for etiological diagnosis. Histopathologically tuberculous infection can be identified by typical caseation along with granuloma of epitheloid cells and Langhans giant cells but it cannot differentiate whether infection is due to mycobacterium tuberculosis or atypical mycobacteria. If it is due to atypical mycobacteria, patient may not respond to the routine antituberculous drugs.

Although Winternitz (1912) categorized splenic TB as a primary or secondary form, some scholars insist that all patients with splenic TB are secondary to the previous infection of tubercle bacillus in other organs [5]. In our case, the patient denied a history of TB or contact with a known case of Tuberculosis and there was only mediastenal lymph node involvement detected by MRI and no involvement in other sites or organs at the time of admission. There are no specific symptoms for establishing the diagnosis of splenic TB [6]. Fever, weight loss and left hypochondial pain was the presenting symptoms in our case.

Like the treatment of pulmonary tuberculosis, treatment of splenic TB should last for more than 6 months. Standard antituberculosis medication should be taken preoperatively and postoperatively

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