ABSTRACT
Spleen is a rare site for Extrapulmonary Tuberculosis (TB) and is usually seen secondary to pulmonary disease. It is extremely rare in immunocompetent individuals and isolated presentation as splenic abscess in the absence of primary tuberculosis elsewhere is still rarer. We present one such case of isolated splenic TB in a 50 year old immunocompetent individual presenting with high fever and pain per abdomen.

Keywords: Extrapulmonary Tuberculosis, Spleen, Splenic Tuberculosis, Splenic Abscess, Tubercular Splenic Abscess.

INTRODUCTION
TB continues to be a major health problem affecting one third of world’s population according to WHO. Extrapulmonary TB accounts for around 15% of the cases and is usually seen in patients with miliary TB. Spleen is one of the rare and unusual sites for TB and is seen secondary to pulmonary TB especially in immunocompromised patients.

There are very few case reports of splenic TB in literature. In a series of 37 cases with focal lesions of the spleen, Joazlina et al. found only 4 cases having tuberculous etiology. Isolated TB of spleen presenting as splenic abscess is rarer and unusual in immunocompetent individuals and therefore the need for this report.

CASE REPORT
50 year old nondiabetic, non-smoking male came with complains of intermittent pain in left hypochondriac region and abdominal discomfort along with post prandial fullness. Patient also gave history of on and off high grade fever since 15-20 days. There was no history of cough, hemoptysis, weight loss, pulmonary or abdominal tuberculosis or TB contact. Abdominal examination revealed an enlarged and tender palpable spleen.

Blood investigations showed Hb of 7.9g/dL, TLC of 4.5x10^3/µL, platelet count was 50x10^3/µL, HCT of 26.1%, PT – 17.9 seconds and INR was 1.4, serum Haptoglobin was <30mg/dL and serum creatinine was normal. Because of his low Hb and platelets, Bone marrow biopsy was performed and showed features suggestive of Hypercellular marrow showing Erythroid Hyperplasia with normoblastic and macronormoblastic maturation.

After above mentioned inconclusive investigations, patient was admitted as a case of splenomegaly under evaluation. This was followed by Chest X-ray which showed no pulmonary abnormalities.

CT Abdomenshowed Mild Hepatomegaly, Gross Splenomegaly with Splenic Infarcts, Mild to Moderate Ascites, Mesenteric Lymphadenopathy. However, there was no intestinal lesion or thickening.

Because of the risk of splenic rupture, Splenectomy was performed and sent for histopathological review. Specimen of spleen measured 25x13x4cm. External surface was well encapsulated and showed a slightly raised, well demarcated pale are measuring 2x2 cm. Cut surface showed a well circumscribed subcapsular yellowish pale area measuring 5x3x2cm. (Infarct, Caseous necrosis) [Figure 1].

On Microscopy, multiple sections from the spleen and the well circumscribed pale area showed large area of caseous necrosis surrounded by well formed epithelioid cell granulomas along with langhan’s type of giant cells and lymphocytes. Also seen were numerous hemosiderin-laden macrophages.[Figure 2a&2b] Based on the above microscopy findings and absence of primary site of either pulmonary or intestinal TB, final diagnosis of splenic tuberculous abscess was made.
Splenic TB as Abscess

Figure 1: Enlarged specimen of spleen after serial slicing; showing well circumscribed, subcapsular pale yellow area.

Figure 2a: Microscopy (H&E, 10X) showing well demarcated area of caseous necrosis to the right and viable splenic tissue to the left.

Figure 2b: Microscopy (H&E, 40X) showing epithelioid cell granuloma along with Langhan’s Giant cells and lymphocytes.

DISCUSSION

90% of primary TBs seen in lung, whereas isolated splenic TB, as we present here, is a rare form of extrapulmonary TB. Diagnosis of such isolated cases is often delayed due to nonspecific clinical presentation as well as radiological findings and the need of surgical intervention for confirmation of the disease.

Involvement of spleen in TB can be through following ways- (i) miliary TB, (ii) generalized caseating TB lymphadenitis, (iii) acute nonreactive hematogenous tuberculosis. There are five pathomorphological classification for splenic TB which includes miliary tuberculosis, nodular tuberculosis, tuberculous splenic abscess, calcific tuberculosis and mixed type tuberculosis.

Spleen is the third most commonly infected organ after lung and liver in miliary TB appearing as multiple millet sized nodules on gross seen especially in immunocompromised patients. An unusual form of splenic TB is the primary involvement of the spleen appearing as solitary TB or a tubercular abscess as seen in our patient. Such rare cases of splenic abscess have been reported by Sharma et al. and Gupta et al. in immunocompromised and immunocompetent patients respectively.

It is also said in literature that patients with splenic involvement in TB as tubercular abscess have underlying HIV infections, however, it is not uncommon in non-HIV patients as well. One such study by Adil et al. reported 10 such cases of splenic TB in immunocompetent patients although these patients also showed other organ involvement by Tuberculous infection. Such cases of isolated splenic TB in non-HIV patients were reported by Singh et al. which confirmed the diagnosis on histopathology and acid-fast staining. However, in our case, patient was HIV negative and did not give any history of or show any evidence of other organ involvement by TB.

Low prevalence of splenic abscess is because of its nonspecific clinical presentation. Splenic enlargement along with fever of unknown origin and abdominal pain is commonly seen in patients with various infectious diseases, splenic infarction and malignancies like lymphoma. A similar clinical picture was seen in our patient as well. Other nonspecific lab findings are leukocytosis, raised erythrocyte sedimentation rate and thrombocytopenia.

Although ultrasound examination is simple, noninvasive and easily available, CT scan is much more useful and a preferred choice of investigation in cases of splenic TB. Lesions are in the form of solitary/multiple nodular or saccular foci or hypodense areas in the spleen. It also helps in indicating its nature, the site for possible biopsy or drainage and follow up after treatment. However, lesions too small on the splenic capsule are difficult to get picked up by CT scans. Machiels et al. stated that a hypoechoic focal lesion in the spleen can be seen...
in various other lesions like congenital cyst, malignancies like lymphoma and sarcoma, metastatic deposit and pyogenic abscesses. Due to such nonspecific findings, histopathological and microbiological examination of either a biopsy sample or splenectomy specimen remains the gold standard for confirmation of the diagnosis. However, because of its invasive nature, it is not easily accepted by the patients. Typical histopathological picture of caseation along with granulomas of epithelioid cells and langhan’s giant cells, as seen here, confirms the diagnosis of splenic TB. In the preantibiotic era, splenectomy was performed as the treatment of choice for splenic TB. It resulted in a recovery rate of 60%. Whereas, in present period, treatment of splenic TB is same as that of pulmonary TB along with certain principles, that is, timely treatment in combination, regularly and properly through the whole course and should last for longer than 6 months.

CONCLUSION
Primary Splenic TB, because of its rarity, imprecise clinical symptoms and nonspecific radiological findings, can be misdiagnosed. Therefore, the need to keep TB in mind as one of the differentials in patients with fever and splenomegaly especially in TB endemic areas.

REFERENCES