



## Splenic tuberculosis presenting as fever of unknown origin.

**Dr Harshal Rajekar**

(Hepato-biliary Surgeon), Faculty, Department of Surgery, Bharati Medical College and Research Centre, Pune.

**Dr Yash Shrivastava**

(Resident, General Surgery), Bharati Medical College and Research Centre, Pune.

**Dr Anshul Batalia**

(Resident, General Surgery), Bharati Medical College and Research Centre, Pune.

### ABSTRACT

Fever of undetermined origin always poses a challenging problem to the physician. Tuberculosis is an important health problem in developing countries. It is mostly seen in immune-compromised patients. And it is one of the common causes of fever of unknown origin. A case report of a splenic tuberculosis in 48 years old male who is not known of any immune deficiency state, presented with 3 weeks history of fever and found to have severe neutropenia and with negative work up for all hematological, rheumatological and malignant causes.

### KEYWORDS

Adverse Drug Reactions(ADRs), antitubercular drugs, DOTS therapy.

### INTRODUCTION

According to WHO, 2 billion people, equal to a third of the world's total population are infected with tuberculous bacilli, and global tuberculosis incidence is still growing at 1% a year.<sup>1</sup> Splenic tuberculosis (splenic TB) 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 miliary TB is common. The misdiagnosis rate is high if there is no tuberculosis history in other organs. In this case report, we present the presentation, diagnosis, treatment and a literature review<sup>2</sup>.

Tuberculosis (TB) continues to be a major health problem worldwide, despite considerable advances in the diagnosis and treatment of the disease.<sup>1</sup> This disease presents with diverse clinical symptoms, including both pulmonary TB and extrapulmonary TB. Extrapulmonary TB accounts for almost 15% of all cases. Among the extrapulmonary forms, splenic TB is unusual. This form of TB is normally seen as part of miliary TB. As this report reveals, splenic TB, undetectable in primary sites in the body, is a rare variant of extrapulmonary TB.

### CASE REPORT

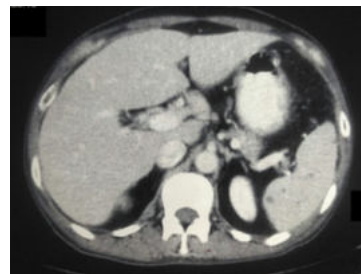
A 46 year male, married, farmer by occupation presented at our institute with complaints of abdominal pain in left hypochondriac region with generalized weakness since 3 months, with progression and worsening of pain since last 2 weeks prior to admission. Associated history of low grade fever with chills for past 15 days was present. No history of cough/ sputum/ hemoptysis/ breathlessness. Patient is a non-smoker, non-diabetic with no family history of TB.

On clinical examination, he had average built and good nutrition with stable vital signs. He had respiratory rate 18/min along with normal breath sounds over bilateral lung fields. He had tenderness in left hypochondriac and inter-coastal region with no obvious organomegaly. The liver was not palpable and the examination of other systems was not remarkable.

His haemoglobin level was 13.2 g/dl; TLC was 15000/ mm<sup>3</sup> with neutropenia. Additional biochemical parameters including liver functions, blood sugar, blood urea, and serum creatinine were within normal limits. The patient was found to be human immunodeficiency virus (HIV) seronegative by enzyme-linked

immunosorbent assay (ELISA). His chest x-ray was suggestive of old healed calcified granuloma in both upper zone.

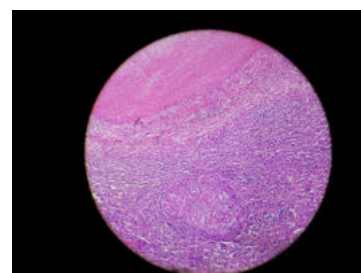
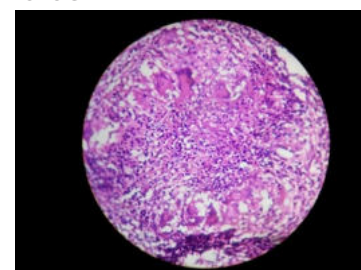
### CT SCAN



### INTRA-OPERATIVE FINDINGS

Splenectomy with distal pancreatectomy was done.

### HISTOPATHOLOGY



**Report :** White pulp with large areas of caseous necrosis with many well-formed granulomas composed of epithelioid cells, lymphocytes, foreign body giant cells, a few Langhans type of giant cells along with central caseous necrosis.

2 out of 3 lymph nodes show complete replacement by caseous necrosis suggestive of tubercular splenitis with lymphadenitis.

## DISCUSSION

The patient reported in the present article presented with fever of unknown origin with severe neutropenia, and was diagnosed to have splenic tuberculosis based on echogenic findings of abdominal CT. The diagnosis was supported by histologic findings and he had eventual favorable clinical outcome following splenectomy along with administration of anti-tuberculous medication.

Splenic Tuberculosis is rare and develops as the result of either dissemination of pulmonary or biliary TB, following either ingestion of contaminated food or infected sputum. In developed countries it is seen in patients with HIV, but it is common health problem in developing countries with significant mortality and morbidity. Our patient had isolated splenic tuberculosis, which is rare in immune-competent person.

The spleen is the most affected abdominal organ with tuberculosis. In 1966, Lundstedt et al. reported 11 cases of splenic involvement in their series of 112 patients with abdominal tuberculosis. Splenic enlargement was the most common manifestation in such cases. Focal and hepatic involvement was also found to be frequently associated with this condition.

Splenic tuberculosis is generally a difficult diagnosis, as the clinical and laboratory findings are non-specific. Although the ultrasound of abdomen is cheap and available but CT scan of abdomen is the investigation of choice which shows multiple rounded, hypo dense lesions in these cases, but such findings are also non-specific since they may also be present with pyogenic splenic abscess or lymphomas.

Splenectomy has been advocated as the treatment of choice for splenic tuberculosis in the pre-antibiotic era. Splenectomy resulted in a recovery rate of approximately 60%. Anti TB medication, however, should be considered as complementary therapy and should continue for 12 months.

Our patient case was peculiar since he had no immunosuppressive condition, and presented with fever for 3 weeks with severe neutropenia caused by splenic tuberculosis. To our knowledge such a case has not been published before, with the exception of one published case with neutropenia and splenic tuberculosis.

## CONCLUSION

Even if tuberculosis is a familiar condition, an unusual presentation may disguise its correct nature, expressing itself as cases of unexplained fever with severe neutropenia. Abdominal Tuberculosis should also be kept in mind in patients with fever, splenomegaly in TB endemic areas.

## REFERENCES

1. Bozer M, Coskun A, Düzün A, Karaoğlu M: Abdominal tuberculosis and clinical presentations. *Clin Sci Doctor*. 2001, 7: 194-7.
2. Ho PL, Chim CS, Yuen KY: Isolated splenic Tuberculosis presenting with pyrexia of unknown origin. *Scan J Infect Dis*. 2000, 32: 700-1. 10.1080/003655400459685.
3. Meshikhes AW, Al-Momen SA: Laparoscopic diagnosis of splenic tuberculosis. *Surg Laparosc Endosc Percutan Tech*. 2006 Oct, 16 (5): 355-6. 10.1097/01.sle.0000213723.26967.cb.
4. Lundstedt C, Nyman R, Brismar J, Hugosson C, Kagevi I: Imaging of tuberculosis. II. Abdominal manifestations in 112 patients. *Acta Radiol*. 1996, 37: 489-95. 10.3109/02841859609175431
5. Bhansali SK: Abdominal tuberculosis. Experiences with 300 cases. *Am J Gastroenterol*. 1977, 67 (4): 324-37.
6. Denton T, Hossain J: A radiological study of abdominal tuberculosis in a Saudi population, with special reference to ultrasound and computed tomography. *Clin Radiol*. 1993, 47: 409-14. 10.1016/S0009-9260(05)81062-1
7. Chapman AZ, Reeder PS, Baker LA: Neutropenia secondary to tuberculous splenomegaly: report of a case. *Ann Intern Med*. 1954, 41 (6): 1225-31.