

Tuberculous Splenic Abscesses as an Etiology in Prolonged Fever

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ABSTRACT

Extra-pulmonary tuberculosis covers all forms of tuberculosis in which the disease process occurs outside the lungs. Tuberculosis is one of the common infectious causes of splenic enlargement, but tuberculous splenic abscess is a rare presentation.

We report the finding of tuberculous multiple splenic abscesses in a young male patient aged 33 years with prolonged fever. The main clinical feature was fever for 6 months prior to admission. Abdominal ultrasound revealed the spleen was normal in size but showed multiple abscesses. CT scan abdomen showed splenomegaly with multiple solid nodules. Patient underwent laparotomy and splenectomy, the spleen indeed showed multiple abscesses. Histopathology result showed Langhan's multi nucleated giant cells, caseous necrosis. The patients was diagnosed to have tuberculous multiple abscesses of the spleen. The patient was started on daily short-course antituberculosis drugs with isoniazid, rifampicin, pyrazinamide and ethambutol. He responded well to oral antituberculosis treatment.

Keywords: *prolonged fever, abdominal ultrasound, CT scan abdomen, tuberculosis, multiple splenic abscesses, splenectomy*

INTRODUCTION

Tuberculosis is one of the common infectious causes of splenic enlargement, but tuberculous splenic abscess is a rare presentation.¹ The most common symptoms of tuberculosis are loss of appetite, loss of weight, malaise, night sweats and fever. Extra-pulmonary tuberculosis covers all forms of tuberculosis in which the disease process occurs except in the lungs. Many forms of extra-pulmonary tuberculosis originate from lymphatic or haematogenic spread of mycobacteria from a primary focus in the lung. Diagnosis of extra-pulmonary tuberculosis is often difficult, so diagnosis may be presumptive after excluding other conditions.² Prolonged fever is a condition with continuous fever for at least 3 weeks period and the etiology has not been found yet; even a one-week intensive study has been conducted.^{3,4,5}

We report a case finding of tuberculous multiple splenic abscesses in a patient with prolonged fever.

CASE REPORT

Mr. D, 33 years old, weight 48 kg, was admitted, with chief complaint of fever for 6 months prior to admission. The fever was rising especially in the evening and night with night sweating. There was weight loss 10 kg during that period. Six months before this last admission, he was admitted to another hospital with chief complaint of one week fever, and was diagnosed as typhoid fever and treated with thiamphenicol. Two months after first admission fever came back again and the patient was taken care in ward for one week with the same diagnosis and treatment, the fever did subside but he still felt unhealthy. Two weeks later due to fever he underwent another

admission for one week period and was followed up the next one month.

Physical examination on admission revealed the general condition was moderately ill, with fair nutritional status, mild fever and tachycardia. The conjunctiva were pale, no jaundice on sclera. No enlargement of lymph nodes. Heart and lung were normal. Abdominal examination revealed flat abdomen, no distention, tenderness in epigastric area, no hepatomegaly or splenomegaly by palpation but dullness in traube space.

The laboratory examination on admission showed hemoglobin level of 11.3 g%, leukocyte 4,600/ml, platelet count 209,000/ml, AST 7.1 U/L, ALT 5.9 U/L. There was no abnormality shown on chest X-ray. Because of prolonged fever despite was treated with antibiotics for typhoid fever; abdominal ultrasound was done to find out any intraabdominal focus infection. On abdominal ultrasound the spleen was normal in size but showed multiple abscesses in different sizes, intra abdominal lymph nodes were not detected. To clarify the spleen abnormalities shown on ultrasound, CT scan abdomen with contrast was performed and showed splenomegaly with multiple solid nodules with diameter size range from 4 mm to 20.5 mm. Conclusion of CT scan abdomen was splenomegaly with multiple solid nodules and these solid nodules suspected as malignant lymphoma.

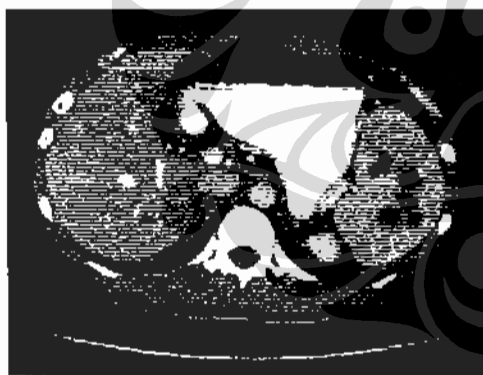


Figure 1. CT scan of the abdomen showing multiple focal hypodens lesions in the spleen

At this time, the clinical differential diagnosis were:

1. Multiple splenic abscesses due to tuberculosis or invasive amebiasis
2. Malignant lymphoma

After joint discussion with medical hematologist, tropical diseases and infection consultant, and digestive surgeon was carried out, and it was concluded that should be offered as splenic infection source controls and to clarify the etiology of the abscesses. Patient underwent laparotomy and splenectomy, the spleen indeed showed multiple abscesses.

Histopathology result showed influx of all elements of leukocytic series with vasodilatation, edema, fibrinous exudates. Aggregations of macrophages, epithelioid cells and lymphocytes. Langhan's multi nucleated giant cells, caseous necrosis.

The patients was diagnosed to have tuberculous multiple abscesses of the spleen. The patient was started on daily short-course antituberculosis drugs with isoniazid, rifampisin, pyrazinamide and ethambutol. He responded well to oral antituberculosis treatment.

DISCUSSION

On admission, the patients with 6 months history of intermittent fever previously hospitalized admission and managed as typhoid fever but there was no improvement of his general conditions. The etiology of prolonged fever, based on diseases group is categorized into 6 groups i.e. infection, neoplasm, collagen diseases, hypersensitivity disorders, metabolic disorders, and factious fever.^{4,5}

Various etiologies of fever in this patient had been explored by laboratory and other medical examinations such as normal chest X-ray, negative PCR TB, negative HIV test, abdominal ultrasound revealed no spleen enlarged but showed multiple abscesses, CT-scan abdomen showed splenomegaly with multiple solid nodule. The patient was diagnosed as multiple splenic abscesses with differential diagnosis malignant lymphoma or metastasis tumor. The patient underwent splenectomy and post laparotomy clinical diagnosis was multiple abscesses of the spleen. Because of the high mortality figures reported for splenic abscesses, the treatment of choice is splenectomy with adjunctive antibiotics.⁷

The common forms of extra-pulmonary tuberculosis are lymphadenopathy, pleural effusion, bone and joint disease, intestinal disease, pericardial disease, meningitis and milliary disease.⁸ The incidence of splenic abscess is very low (0.14%-0.70%) in various autopsy studies, and is usually associated with septicaemic conditions.⁷ Splenic abscess due to mycobacterial infection are even more uncommon.⁹⁻¹¹ Splenic tuberculosis usually occurs following the haematogenous spread of infection or as a part of disseminated disease. Fever and left upper quadrant pain may be the presenting feature in these patients.⁹⁻¹¹ Chaudhuri, Sharma, and Gotor, reported cases of tuberculosis splenic abscess without any underlying disease.⁹⁻¹¹

CT scan of the abdomen is the most sensitive diagnostic tool, as ultrasound may sometimes miss the lesions. CT features of tuberculous splenic lesions include solitary or multiple nodular or saccular foci or hypodense areas in the spleen. Histological or microbiological confirmation is usually necessary to

confirm tuberculosis as the etiology.¹² In this patient CT-scan abdomen showed splenomegaly with multiple solid nodules but surgical specimen revealed multiple abscesses.

The patient was immediately treated with anti tuberculosis drugs consisted once daily of rifampisin 450 mg, INH 300 mg, ethambutol 750 mg, pyrazinamide 1,000 mg, and pyridoxine 10 mg.

The treatment of choice in this case is anti-tuberculosis therapy, while splenectomy, to be performed when necessary.⁷ After splenectomy our patient responded well to antituberculosis treatment and the fever subsided.

In prolonged fever or fever of unknown origin, spleen abscess should be considered as one of the etiology, and screening with abdominal ultrasound followed by CT scan is required.

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