AN UNUSUAL PRESENTATION OF TUBERCULOUS SPLENIC ABSCESS

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A 55-year-old male presented with painful lobulated mass on the left lateral lower chest and upper abdomen. Evaluation revealed the mass as a subcutaneous abscess originating from and communicating with a splenic abscess. The patient was treated by incision and drainage of the subcutaneous abscess along with splenectomy, and antituberculous therapy. Histopathological examination of the spleen confirmed the diagnosis of splenic tuberculosis. Postoperatively, the patient improved, and was discharged ten days later on antituberculous drugs. One year later, the patient remains asymptomatic and shows progressive improvement.

Key Words: Tuberculous, Spleen, Abscess.

INTRODUCTION
One-third of the population of the world is infected with mycobacterium tuberculosis. Eight million people, ninety-five percent of whom live in developing countries develop this disease each year. These figures increase annually and will certainly continue to increase. This worldwide increase is also attributable to its interaction with the human immunodeficiency virus (HIV) epidemics.1,2 Tuberculosis of the spleen is not uncommon, but splenic abscess formation as a result of tuberculosis is rare.3,4 Presented here is a case of tuberculous splenic abscess presenting as a subcutaneous abscess. Also discussed are the management options of tuberculous splenic abscess.

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CASE REPORT
A 55-year-old male presented with a gradually increasing mass on the left lateral lower chest and upper abdomen over a period of one year. He had no other medical problems and no history of contact with a tuberculous patient. On examination, a lobulated subcutaneous mass measuring about 7 cm in diameter, soft to cystic in consistency, immobile and attached to the skin which was tense and slightly red, tender but not warm, not pulsating, and with no bruit was found on the left lower chest and upper abdomen laterally. The spleen was enlarged 8 cm below the costal margin. Other systems were normal.

Chest X-rays showed a calcified lesion near the hilum of the right lung suggestive of an old pulmonary tuberculosis. Abdominal radiographs showed calcified lesions in the left upper quadrant (Figure 1). Ultrasound of the abdomen indicated an enlarged spleen with areas of calcification. CT scan of the abdomen revealed a splenic abscess communicating with another subcutaneous abscess through the lower chest wall (Figure 2). Based on these data, a complicated tuberculous splenic abscess was the most probable diagnosis.

Under general anesthesia, the subcutaneous abscess was incised and drained, and splenectomy was performed simultaneously. The spleen was found to be enlarged, fibrotic, and adherent to the lower chest wall. There was an abscess cavity within the spleen communicating with the subcutaneous abscess through a small tract in the lower chest wall below the insertion of the diaphragm. The abscesses contained thick pus and necrotic material. Histopathology of the spleen revealed the characteristic tuberculous granuloma with epithelioid cells, Langhans’ multinucleated giant cell (center), and caseation necrosis (left side of the picture).

Figure 1: Abdominal X-ray showing calcified lesions in the left upper quadrant

Figure 2: An enhanced CT Scan of the abdomen showing a splenic abscess communicating with another subcutaneous abscess through the lower chest wall

Figure 3: A histopathology slide of the spleen showing the characteristic tubercle granuloma with epithelioid cells (right side of the picture), Langhans’ multinucleated giant cell (center), and caseation necrosis (left side of the picture)
necrosis (Figure 3). Acid fast bacilli staining, tuberculous and bacterial cultures were all negative.

The patient was started on Isoniazid (INH) 300 mg OD, Rifampin 600 mg OD, Ethambutol 600 mg OD and Pyrazinamide 500 mg OD for 5 weeks, then maintained on the former two drugs. The patient’s condition improved on antituberculous medications and showed good clinical progress at one-year follow-up.

DISCUSSION

Though the prevalence of tuberculosis in the developed countries declined significantly over the last few decades, in the developing countries it remains a major public health problem. The decline in the developed world can be attributed to mass vaccination and the advanced health care systems, whereas in developing countries poor socioeconomic status, overcrowding, poor nutrition, and lack of medical care all contribute towards the increased incidence of tuberculosis. Tuberculosis is usually caused by Mycobacterium tuberculosis through airborne transmission. Tubercle bacilli thrive best in tissues with a high oxygen tension. Consequently, certain organs of the body such as the lungs, renal cortex, and growing ends of bones are more commonly involved than other organs, such as the liver and spleen, where the oxygen tension is low. Splenic involvement is usually associated with disseminated (miliary) tuberculosis, and tuberculous abscess formation in the spleen is attributed to the over-reaction of the host immune response with the formation of caseation necrosis. Splenic tuberculosis cases are usually asymptomatic and in less than half of cases with abscess formation, they may present with the classic symptoms of fever, chills, tenderness in the left upper quadrant, and splenomegaly. The diagnosis of splenic tuberculosis can be reached by a high index of suspicion especially in endemic areas. Calcifications in the spleen is an important radiological sign of tuberculosis. Isolation of tubercle bacilli by the Ziehl-Neelsen staining and culture techniques of aspirates from the splenic abscess, and the characteristic histopathologic finding of tubercle granuloma of the spleen establishes the diagnosis of tuberculosis.

Splenic tuberculosis without abscess formation is usually managed medically with anti-tuberculous drugs. Tuberculous splenic abscess has been successfully treated with anti-tuberculous drugs alone, and by splenectomy. However, surgical treatment is preferred in a solitary tuberculous splenic abscess in otherwise fit patients, and in such complicated cases as this case. Penetration of tuberculous splenic abscess into the subcutaneous tissues or to the outside is extremely rare. This patient was managed surgically, and treated with anti-tuberculous drugs for almost a year, as splenic tuberculosis is usually associated with a disseminated disease.

In conclusion, because of the rising incidence of tuberculosis, unusual presentation of tuberculosis should be suspected as the disease is becoming increasingly more common.

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