

Splenic abscess: A rare presentation

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Abstract

Splenic abscess is a rare entity with a wide variability of causative pathogens. Its reported mortality rate is still high, up to 47%, and can potentially reach 100% among patients who do not receive antibiotic treatment. The timely and widespread use of imaging methods (eg, computed tomography [CT] scanning, ultrasonography) facilitates early diagnosis and guides treatment, thus improving the prognosis. We are reporting a 42-year-old male patient presented with an abscess in the spleen. The etiology was due to typhoid fever. It was diagnosed by CT-scan and treated by splenectomy. A review of the modalities of treatment is discussed.

Keywords: Splenic abscess, Typhoid fever, Splenectomy

Date Submitted: 06.11.2012

Date Accepted: 01.04.2013

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INTRODUCTION

Abscess of the spleen is a rare discovery. About 600 cases are reported in the international literature so far. It is usually associated with trauma and infections of the spleen in the presence of a different primary site of infection, especially endocarditis. Other infective sources include typhoid, paratyphoid, malaria, pneumonias and osteomyelitis.

Alcoholics, diabetics, and patients who are immunosuppressed are among the most susceptible to splenic abscesses.^[1]

Its reported mortality rate is still high, up to 47%, and can potentially reach 100% among patients who do not receive antibiotic treatment. Appropriate management can decrease the mortality to less than 10%.^[2]

CASE REPORT

A 42-year-old man presented to the clinic with attacks of abdominal pain for one month. The pain was localized by the patient in the left hypochondrial region. Two months ago, he developed fever with headache and asked for medical advice from local clinics where he lives in a rural area near Baghdad. He was investigated for his attacks of fever and diagnosed and treated as typhoid fever. He had periods of temporary improvement with relapses of

abdominal pain, fever associated sometimes with sweating and rigors over the second month. He had loss of appetite, nausea with occasional vomiting. He felt weak and ill-health since then. He had no previous hospital admission.

At presentation, he looks weak with a complain of abdominal pain. His vital signs were within normal values apart from fever (temperature 38°C). Abdominal examination reveals mild tenderness in the area of the spleen, with no other significant findings. Laboratory investigations were within normal apart from elevation in the number of leukocytes (WBC 15,000/mm³). U/S of the abdomen reveals a hypoechoic area in the spleen. Chest and abdominal X-ray were within normal. CT scan of the abdomen showed a large abscess of the spleen, of an average size of 15×9 cm (Figure 1). He was admitted to the surgical ward and antibiotics were prescribed for him. I.V. Cefuroxime (2 gm/day) with I.V. metronidazole (500 mg t.d.s). A decision of splenectomy was made. Specimen of abscess content was sent for bacteriology with negative result. The operation was done with uneventful post-operative period. Figure 2 shows the removed spleen. Follow-up for 6 months was without complaint.

DISCUSSION

Abscess of the spleen is a rare discovery, it is rather rare, especially in developed countries in which the frequency

of parasitic infections is low.^[3] The age & gender of our patient is consistent with the peak age group for initial diagnosis of splenic abscesses described in the literature.^[4] Depending on the diagnosis of typhoid fever in the beginning of his complaint and the prevalence of this disease in the rural areas, we conclude that the cause of the abscess is typhoid fever, although the culture and sensitivity of the specimen of pus from the abscess was not positive. This might be due to the antibiotics given in the pre-operative period and continued throughout after operation.

Typhoid fever is one of the etiologies of splenic abscess. Splenic abscesses have other diverse etiologies. The most common is hematogenous spread originating from an infective focus elsewhere in the body e.g. infective endocarditis, typhoid, paratyphoid, malaria, pneumonias, osteomyelitis, and pelvic infections. Splenic trauma is an etiologic factor. Splenic infarction resulting from systemic disorders, such as hemoglobinopathies (especially sickle cell disease), leukemia, polycythemia, or vasculitis, Patients who are immunosuppressed are among the most susceptible to splenic abscesses.^[5,6]

Our patient had the classical triad of fever, left upper quadrant pain, and splenomegaly. This is seen in only about one third of patients. The signs and symptoms of splenic abscess are not very specific. Therefore, splenic abscess remains a substantial diagnostic challenge.^[7]

The work-up of diagnosis of our case includes chest radiograph and Plain x-ray of the abdomen. They were not informative in this case. Both show nonspecific findings in patients with a splenic abscess, although some features can be helpful in some cases such as elevated left hemidiaphragm and pleural effusion in chest x-ray and soft-tissue density or a gas collection in the left upper quadrant in plain abdominal x-ray.

The diagnosis of our patient was facilitated by U/S and CT-scan.^[8] Both describe the site, size and consistency of the content of the abscess. The widespread use of both imaging methods leads to early diagnosis and guides treatment, thus improving the prognosis. U/S is more available and is non-invasive. It is helpful in diagnosis and management. As shown in Fig.1, CT-scan showed a low density mass in the upper part of the spleen and it was helpful in decision making. CT scanning is presently the criterion standard in helping to establish the diagnosis of splenic abscess with reported sensitivity approaching 100%. In addition, guided drainage can be performed during the examination.

The management of our patient was surgical. We did splenectomy through an open laparotomy. This decision was made taking into consideration the large size of the abscess and the site of the abscess just below the diaphragm together with the unavailable expert in percutaneous aspiration in our hospital at time of patient's management. This policy is still considered the standard of care for splenic abscesses.^[9, 10] However, more recent studies have also referred to alternative options, including laparoscopic splenectomy and spleen-preserving protocols, such as percutaneous imaging-guided drainage.^[11, 12]

In conclusion, splenic abscess is suspected in patients with typhoid fever with prolonged attacks of fever and ill-health especially in endemic areas.



Figure 1. CT-scan showing a large low-density lesion in the spleen indicating an abscess.

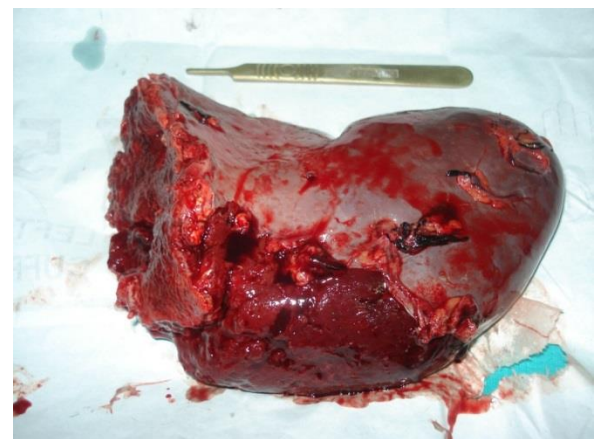


Figure 2. The removed spleen.

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