

Splenic abscess: a rare presentation

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Splenic abscess is a rare clinical entity with an incidence of 0.2–0.7% in autopsy-based studies. When untreated, splenic abscess is associated with nearly 100% mortality; in treated patients, the mortality rate is 16.6% during the first 90 days. It mostly occurs in patients with neoplasia, immunodeficiency, trauma, diabetes or splenic infarct. The incidence of splenic abscess is thought to be growing because of the increase in the number of immunocompromised patients who are particularly at risk for this disease and also because of the widespread use of diagnostic modalities. However, the optimal treatment for this remains unclear. We present a case of a 42-year-old man diagnosed with multiloculated splenic abscess and was subjected to splenectomy.

Keywords:

abscess, infection, spleen

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Introduction

Splenic abscess is an uncommon disease and it has been noted to occur at the rate of 0.14–0.7% in autopsy studies [1]. It is an uncommon entity. This uncommon disease has been reported more frequently in recent times due to increase in the number of immunocompromised and cancer patients and also due to advances in imaging studies [2,3]. The management of splenic abscess is based on medical therapy with antibiotics and splenectomy or percutaneous drainage, with good results [4]. However, the optimal treatment remains unclear. Although it is recognized that percutaneous drainage may be appropriate for some patients, a high failure rate has been observed for this procedure and surgery remains the mainstay treatment [5–7]. We present a case of a 42-year-old diabetic patient with multiloculated splenic abscess, who was subjected to antibiotic therapy and splenectomy and responded well.

Case report

A 42-year-old patient presented with left-upper quadrant abdominal pain since 15–20 days, with intermittent episodes of fever with chills and rigors. History of loss of appetite was present. There was no history of trauma. He also complained of dyspnoea, even on mild exertion. As per the history, the patient had no chronic illness, but blood analysis revealed abnormal blood sugar levels were present (incidentally, diabetes was diagnosed). HbA_{1c} was 6.9%. Serological evaluation for HIV, amoebiasis, urine culture and screening for sickle-cell trait were all negative. The total leucocyte count was 15 800. Examination revealed febrile patient to have marked tenderness over

the left chest and the hypochondrium, with grade II tender splenomegaly. Diagnosis was established using abdominal sonogram and computed tomographic (CT) scan of the abdomen. Chest radiography revealed left-sided pleural effusion (sympathetic pleural effusion). Ultrasonography suggested mixed echoic patterns (ranging from hypoechoic to hyperechoic patterns) with internal debris; CT scan suggested multiloculated abscess with multiple satellite abscess pockets with normal pancreas and left-sided pleural effusion. Culture showed *Klebsiella pneumoniae*. The patient was started on intravenous antibiotics metronidazole and ceftriaxone for 2 weeks, but he was still febrile and hence splenectomy was decided to be performed (Fig. 1). The patient was administered intravenous imipenem for 10 days and was vaccinated with Hib and pneumovax postoperatively on day 14.

Figure 1



Enlarged spleen removed *in toto*.

Discussion

Splenic abscess have diverse aetiologies [8]. The incidence of splenic abscess in various autopsy series has been estimated to be between 0.2 and 0.7% [9]. The rare occurrence of splenic abscess is further evidenced by the fact that no splenic abscess was reported in a review of 540 intra-abdominal abscesses [10]. However, this uncommon disease is being reported more frequently in recent times. Splenic abscesses may often be misdiagnosed because the signs and symptoms are nonspecific; nevertheless, modern imaging has improved the process of their diagnosis. The most common organisms in most reported series have been aerobic microbes and particularly *Streptococcus* spp. and *Escherichia coli* [6]. The most common cause is haematogenous seeding of the spleen from an infective focus elsewhere in the body, with infective endocarditis being the most common source, accounting for 10–20% of the cases. The other causes include typhoid, malaria, pneumonia, urinary tract infections and pelvic infections. Splenic trauma is one of the major causes of splenic abscess. Areas of splenic infarction in disorders such as leukaemias and polycythaemia may get infected and evolve into splenic abscess. Alcoholic, diabetic and immunocompromised individuals are more suspected to develop a splenic abscess [9]. A study by Sarr and Zuidema [11] suggested triad of fever, left-upper quadrant pain and tender mass in patients with splenic abscess. Ultrasonography of the abdomen demonstrates hypoechoic (87%) or anechoic (13%) lesions in the spleen, outlined in most cases by irregular walls [12]. CT scan of the abdomen is the most reliable tool for diagnosing splenic abscess, which appears as a low-density mass lesion with peripheral enhancement after intravenous contrast. CT scan also helps in planning therapeutic strategies such as percutaneous drainage. There is no gold-standard treatment for splenic abscess. Traditional treatment includes appropriate antimicrobial therapy with or without splenectomy [9]. Percutaneous aspiration or drainage may be used as a bridge to surgery, allowing nonoperative healing for splenic abscess patients who are at risk for surgery and helps avoid the risk of a fulminant and potentially life-threatening infection [4]. Multilocular abscesses, fungal abscesses, infected haematomas and abscesses with thick contents are unresponsive to percutaneous drainage and should be subjected to splenectomy [13]. Splenectomy

along with antibiotics is regarded as the treatment of choice by many physicians. The development of antipneumococcal vaccine and newer antibiotics has improved the outlook of patients who undergo splenectomy [8].

Conclusion

The best therapeutic approach for splenic abscess is still a matter of debate. Percutaneous drainage of abscess can be used as a bridge to surgery for those patients who are critically ill or who have several comorbidities.

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Conflicts of interest

None declared.

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