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Case Report

Isolated splenic abscess in an adolescent girl: Case report

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Abstract: Splenic abscess is an uncommon entity and remains a diagnostic challenge and therapeutic dilemma for the clinicians. Current sophistication in imaging and increased awareness has contributed to prompt diagnosis and different therapeutic options for selected groups of patients have resulted in acceptable morbidity and mortality. Our patient presented with abdominal pain of 2 weeks duration. Many surgeons believe that splenectomy is the optimal treatment for splenic abscess, but ourpatient was treated with intravenous antibiotics and ultrasound follow up was done.
Keywords: Splenic abscess, Abdominal pain, Splenectomy

INTRODUCTION

Splenic abscess is uncommon in pediatric age group. It usually occurs in conditions of disseminated infective focus. The reported incidence in autopsy series varies between 0.3-0.7% [1].The reported mortality rate ranged from 47 to 100% [2,3]. Abscess of the spleen is a rather rare clinical entity. About 600 cases have been described so far in the international Literature [4]. The clinical manifestations of splenic abscesses usually include abdominal pain, exclusively located or, at least, more intensely described in the upper-left-quadrant area. Fever, nausea, vomiting and anorexia may be also present in various combinations [5]. Laboratory findings are consistent with the acute phase of infection, but their exact nature is determined by the pathogen isolated from the abscess [6].The most common pathogens detected include Staphylococcus and Streptococcus [7].

Imaging by common abdominal X-ray or ultrasound may be suggestive, but the lesion is usually revealed via computed tomography (CT). Due to the seriousness of the potential implications, including a threat to life itself, the most usual treatment currently applied is splenectomy, which is followed by rapid clinical improvement .Conventional treatment of abscess is incision and drainage, although splenectomy or splenic conservation is alternative.

CASE REPORT:

A 14-year-old girl presented to our hospital's outpatient clinic with history of pain intheepigastric and upper-left-quadrant area of the abdomen. The pain was not altered after food intake or sleep. The patient recognized no other major symptoms, such as vomiting, nausea or fever. Moreover, the patient was not treated for any other disease at the time (including recent infection or operation), nor had he ever been admitted to the hospital in the past. Clinical examination reproduced localized sensitivity in the area of the spleen, with no other significant findings.Laboratory testing revealed a mild increase in the number of leukocytes, which was otherwise within the normal range. Blood and urine cultures were negative. Imaging included chest and abdominal X-ray, followed by a USG and CT scan of the upper abdomen. The latter detected a large abscess of the spleen, of an average sizeof 3 cm × 2 cm. Aspiration of the abscess was performed under CT guidance and the material obtained was cultured, which led to the development of several colonies identified as Streptococcus spp. No other pathogen of any kind was detected in the cultures.

Fig 1: Ultrasound abdomen showing well-defined splenic focalcystic lesions.

Fig 2 : CT scan of the upper abdomen showing well-defined focal lesions, cystic in nature, measuring 3 cm × 2 cm.

DISCUSSION

The first account of splenic abscess comes from the writings of Hippocrates. Grand-Mourse is credited with the first detailed description of the disease with his case series of 57 patients published in 1885. The disease is thought to be increasing in frequency because of the growing number of immunologically compromised patients [8]. If left untreated; mortality rate is 67-100%. There are only few case reports of splenic abscesses from South Asian countries like India and Pakistan [9,10]. The timely and widespread use of imaging methods facilitates early diagnosis and guides treatment, thus improving the prognosis. Ultrasound is used as a preliminary diagnostic modality, which is often followed by CT scan [11].

However, ultrasonography cannot discriminate between abscess and infarct in some cases, while computed tomography is the examination of choice. In the present case, we found that abdominal ultrasonography could diagnose the presence of splenic focal cystic lesions and the same finding was confirmed by C T abdominal scan.Our patient in this study was admitted with abdominal pain without fever. Abdominal tenderness was present with leukocytosis.

Perhaps the most interesting parameter in our case of splenic abscess, however, is the lack of any obvious risk factors [12]. Indeed, a detailed medical history and clinical examination were performed initially, in an attempt to reveal any of the factors known to be associated with the development of abscesses in the spleen and other organs. However, no such findings occurred. This discovery, along with the detection of common pathogens in the abscess itself (Streptococcus) may imply that further factors, must contribute to the etiology of the disease [13]. Their exact nature and involvement in immunity modification and regulation of the reaction to infectious agents remains to be determined in future [14]. The treatment modalities of splenic abscess are antibiotic therapy whether in conjunction with splenectomy, percutaneous drainage or aspiration or antibiotic therapy alone [15]. But better outcome was found in patients with splenectomy than patients with percutaneous drainage or aspiration in solitary splenic abscess [16]. The patient of this case gained benefit from intravenous antibiotics with ultrasound follow up.

CONCLUSIONS

Splenic abscess is an uncommon surgical entity. High index of suspicion and liberal use of radiological studies is essential for timely diagnosis. Splenic abscess should be suspected in febrile patients with left upper quadrant tenderness and leukocytosis, and diagnosis confirmed based mostly on imaging studies. Patient can be cured with non-operative treatment.

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