Case Report

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Splenic abscess in an immune competent individual: case report and review of the literature

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ABSTRACT

Splenic abscess is a rarity in immune competent individuals. *Salmonella, Pasteurella multocida, M. tuberculosis* and *actinomycosis* have been implicated. A 63-year old immune competent female with an arab descent presented with fever, nausea and vomiting. Polymorph leucocytosis, high ESR and markedly high C-reactive protein (CRP) were reported. Chest x-ray and CT scan pointed to the diagnosis. She was managed uneventfully by splenectomy. *Enterobacter Spp* was grown from operative samples. The patient was well and asymptomatic when seen six months post-operatively. Splenic abscess should be considered even in the absence of co- morbidities in individuals with fever, non-specific abdominal symptoms, polymorphs leucocytosis and high CRP.

Keywords: Case reports, Enterobacter spp, Immune-competence, Splenic abscess

INTRODUCTION

Splenic abscess is a rare entity, with very low reported frequencies in autopsies. 1-3 Splenic abscess has been reported mainly secondary to tuberculosis, salmonellosis and bruellosis. In Sudan series complicated splenic cysts secondary to Brotenella Hensele were reported. Furthermore, splenic abscess often occurs in the patients with underlying diseases. Patients with multiple splenic abscesses (MSA) or immunodeficiency are considered to have a poor prognosis and high mortality. Splenectomy is considered as the best modality of treatment. 3-8 Recently, medical treatment and abscess drainage proved to be efficient in the management of splenic abscesses. 9,10

However, various conditions interfere with the prognosis of splenic abscess, such as underlying diseases, abscess numbers and sizes, organism spectra, therapeutic methods and the general conditions of the patient. APACHE II score is a method to evaluate the general condition and to easily get a score for patients with splenic abscess and predict the outcome.

CASE REPORT

A 63-year old female with an Arab descent, presented with back pain, vomiting and nausea for 20 days. She was neither diabetic nor hypertensive. She looked well, febrile (38.00C) with polymorph leucocytosis (20.7 X103/L; 89% polymorphs), haemoglobin of 115 grams/Litre, platelets count of 183.0 X103/L, ESR of 100 mm/first hour and CRP of 300 mg/dL (normal value <5 mg/dL).

Liver and renal function tests were within normal limits. Blood and urine cultures yielded no growth. Chest X-ray showed elevated left hemi-diaphragm (Figure 1). Abdominal ultrasound revealed a hypo-echogenic cystic structure with a diameter of 100×40 mm in the Left upper

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part of the abdomen. CT scan of the abdomen showed a splenic fluid collection with an air fluid level (Figure 2). The APACHE II score was 13. Following informed consent, the patient had an exploratory laparotomy and splenectomy was performed. *Enterobacter Spp.* was yielded from operative samples.



Figure 1: Chest X-ray showing elevated left hemidiaphragm with an air fluid level. No radiographic evidence of pulmonary tuberculosis was seen.



Figure 2: CT showing splenic abscess with air.



Figure 3: CT showing splenic abscess with air different level.

The organism was sensitive to amikacin, azithromycin and third generation cephalosporins, ciprofloxacin, nitrfurantoin and norfloxacin. The histopathology revealed red and white pulp areas with fibrosis and focal infarction of capsule with collection of active chronic inflammatory. No epithelioid granulomas or malignant cells were seen. Ciprofloxacin was administered orally at 500 mg twice a day/10 days postoperatively. Postoperative recovery was uneventful. The patient was well and symptoms free when she was seen 6 months postoperatively.

DISCUSSION

The symptoms/signs of splenic abscess are usually nonspecific, but the most frequent are fever, abdominal pain and tenderness over left upper quadrant, splenomegaly, leucocytosis, and left lower chest abnormalities. Our patient typically non-specific symptoms, but the polymorphs leucocytosis and the markedly high ESR and CRP were strong indicators of bacterial infection. 4,11,12 Metastatic infection or contiguous distant infections are the most common causes of splenic abscess, in this lady no evidence of other contiguous infections or immune suppression were evident, hence her uneventful recovery. ^{7,8} Enterobacteria spp. although common causes of uro and gastro-intestinal are rares causes of splenic abscess. The growth Enterobacteria spp in the abscess could probably point to a hematoginous spread to the spleen . 1-3 Ultrasound and CT scan were important adjuncts to the diagnosis in this case, with CT being superior to US in detecting splenic abscess.¹² Splenectomy as the method of choice seemed to work well for this patient when the organism was not initially known.^{5,11,12}

CONCLUSION

A high index of suspicious has to be maintained to diagnose splenic abscess in immune competent individuals with non-specific abdominal symptoms, polymorph leucocytosisigh and high CRP. *Enterobacteria spp.* are a possible cause for splenic abscess.

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