CASE REPORT

Splenic Abscess : A Case Report

Md. Mohsen Chowdhury[1], Zahidul Haq [2]

Introduction :

Splenic abscess is a rare entity and its incidence in autopsy ranges from 0.14% to 0.7% [1,2]. Septic collection in the spleen can be located both in the parenchyma and in the sub-capsular space. Its situation has no relationship with the aetiology. The main cause is sepsis but it can appear after splenic trauma, in certain haematological diseases or by contiguity. Because of the rareness of this entity there are very few reviews, the more extensive being the one published by Chan and associates[3] who collected 173 patients.

Considering the importance of proper treatment of splenic abscess and the rarity of the condition, the following case diagnosed in surgical unit –III of Bangabandhu Sheikh Mujib Medical University Hospital (BSMMU) is reported.

Case report :

A 22 years old young male patient was admitted in surgical unit-III of BSMMU in December 2003, with the history of fever for three months, abdominal pain located in the left hypochondriac region for two and half months and lump in left hypochondriac region for two months. Physical examination revealed mild anaemia, temperature was 101^0F and there was no enlargement of the accessible lymph nodes. On local examination, the spleen was palpable and mildly tender. Liver was not palpable. Routine haematological examination showed leukocytosis. Simple chest radiograph showed normal finding. Abdominal sonography revealed splenomegaly and a large cystic lesion about 6 cm x 6 cm in size. Computed tomography showed a large hypodence area (Fig-1). Features were highly suggestive of splenic abscess.

Under general anaesthesia (G/A) a left subcostal incision was made and drainage of the splenic abscess was done. Pus sent for culture and sensitivity (C/S) and wall of the abscess cavity was sent for histopathology. A drain was kept in the abscess cavity which was removed after seven days.

Culture of pus showed growth of Staphylococcus aureus. Histopathology report showed features of pyogenic abscess. The patient was discharged on tenth postoperative day and he was alright. But 15 days after discharge, the patient again developed fever, weakness and pain in the left hypochondriac region. Ultrasonogram showed again a cystic lesion in the spleen, suggestive of splenic abscess. The patient was readmitted and splenectomy was performed. Now the patient is doing well after treatment.

1. Assistant Professor, Department of Surgery, Bangabandhu Sheikh Mujib Medical University
2. Professor, Department of Surgery, Bangabandhu Sheikh Mujib Medical University

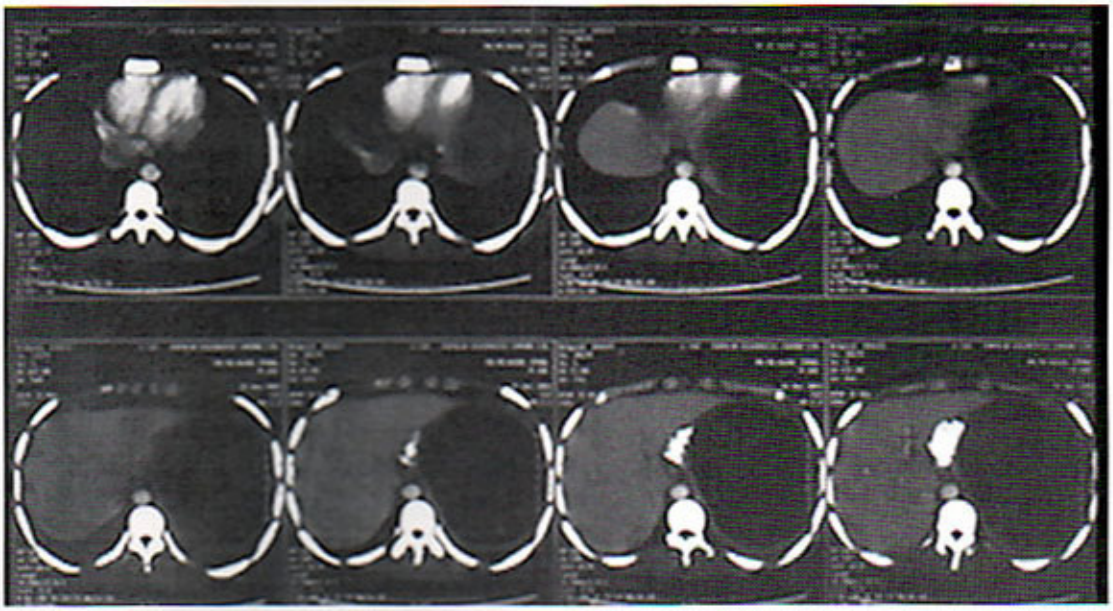

Figure-1 : Computed tomography

Discussion :

Splenic abscess can be classified in several ways. Lawhorne and Zuidima[1] divided them in two groups, unilocular splenic abscess, generally, diagnosed clinically and multilocular splenic abscess usually small and found at autopsy. The latter appear in patients who had presented a serious generalized septic picture. The most accepted classification is that of Chun and Colleagues[3] who divided splenic abscess according to the predisposing cause. Primary pyogenic abscess, after the splenic trauma, in patients with haemoglobinopathies and due to contiguous diseases affecting the spleen.

The presence of a septic focus in some part of the spleen is the most frequent cause of splenic abscess[2-6]. In the pre-antibiotic era, the splenic abscess was mainly related to typhoid fever, malaria or amoebic dysentery[4]. Today the most frequent cause is bacterial endocarditis ranging from 10% to 20% of cases[3,7,8] followed by urinary tract infection. Splenic abscess also has been noticed after dental extraction, appendicitis, prostatectomy or gastrointestinal surgery among other causes[3,6,9]. Lately, there has been an increase in the incidence of splenic abscess in patients treated with immunosuppressive drugs as well as in neutropenic patients. Fungi being the most frequent offenders in all of them[7,10]. The abscess of traumatic origin comes from the secondary infection of a bruised spleen or a splenic haematoma. The trauma record is often difficult to obtain. The period of latency between the trauma and the development of the abscess is usually two weeks[3]. Sometimes an abscess develops from direct extension of a disease in a contiguous organ such as a neoplasm of the descending colon, a penetrating gastric ulcer or diverticulitis[3,6]. In general, the development of a splenic abscess requires the combination of different factors. According to Chun and co-workers[3], the primary factor could be an embolism from a septic focus over a splenic infarction, could be a haematological disease or trauma. Splenic abscess appear mostly in

males with the average age ranging from 37 to 54 years[3,6]. This patient was male but age was 22 years old. Nelken and co-workers[7] described a bimodal distribution, young people under 10 years of age, immune suppressed or drug addicts usually present with multilocular abscess. On the other hand, patients over 70 years of age, may be suffering from diabetes and with a non-endocrine specific focus may develop a unilocular abscess. In most of the cases, symptoms are insidious and non-specific. Fever is the most frequent symptom. This patient also complained of fever for the last three months. Pain in the left hypochondrium appears only in some patients. While vague abdominal pain being more frequent, sometimes the pain has pleuritic characteristics, associated with or without pleural effusion[8]. Splenomegaly appears in only a little more then half of the patients.

The most frequent offending organism is the aerobes with a clear prevalence of streptococcus and staphylococcus. Staphylococcus is responsible for 45% of the cases appearing in drug addicts[7]. This patients, pus also showed growth of staphylococcus.

The best diagnostic methods are computed tomography scan and sonography. Computed tomography scan draws an image of low homogenous density whose edge does not turn more intense after the injection of intravenous contrast[2]. In this case CT scan showed a large hypodence area. Sonographycally, splenic abscess appears as a lesion of mixed echogenicity and generally anechoic with a surrounding hyperechoic zone[11,12,13]. Non-treated splenic abscesses have a high mortality but sometimes they are overlooked and as a result they develop into a chronic stage[3,4,7,14,15]. Treatment of chronic splenic abscess is splenectomy and drainage with postoperative antibiotic therapy[1,3]. Quinn and colleagues had a series of nine percutaneous drainage under computed tomography scan control with a success rate of 76%[16]. According to Berkmen and associates[17] even better results can be obtained with a large-caliber drainage catheter. In this case initially drainage of the splenic abscess under G/A was done with a large caliber catheter. However, most authors suggest this treatment be performed in young patients in order to avoid splenectomy[2,18]. In this case as the patient was young the splenectomy was not done initially. Only drainage of the splenic abscess was done. Nevertheless, splenectomy is mandatory if drainage is unsuccessful. Patients cure with antibiotic therapy alone are the exceptions[19].

If the computed tomography scan shows a solitary abscess, one could attempt percutaneous drainage via computed tomography or ultrasound guidance. More then three fourth of the patients suffering from splenic abscess, especially solitary ones, have been effectively treated by percutaneous drainage alone[3]. When the percutaneous drainage fails, then early splenectomy is the treatment of choice. Because the mortality rate from delayed diagnosis and therapy remains high, splenectomy is essential for cure if sepsis is localized to the spleen [20,21].

In summary, splenic abscess is a rare entity, unusually presenting in specific group of patients with underlying risk factors. Although splenectomy and antibiotics remained the traditional method of treatment, recent literature suggest flexible approaches in the management of splenic abscess. Drainage of the splenic abscess is indicated for a selected group of patients only.

Acknowledgement:

We are grateful to doctors and staffs of anaesthesiology, pathology and surgery department for their kind help to manage the patient. Finally we also thank the patient for allowing us to use the photographs.

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