Post-traumatic Pseudocyst of the Spleen

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Introduction

Splenic cysts are uncommon lesions. These are classified as primary or secondary according to their etiology and pathophysiology. Post-traumatic splenic pseudocyst is a secondary cyst and a possible diagnosis in a patient presenting with lump left upper quadrant [1]. Once diagnosis is made, surgery should be done early to avoid complications like rupture and abscess formation leading to haemoperitoneum and peritonitis [2]. We report a female patient with splenic cyst following trauma 5 years before which was treated with partial cystectomy, marsupilization and preservation of healthy splenic parenchyma.

Case Report

A 22 year old lady was admitted with the history of pain abdomen off and on and lump abdomen over 2 years. Pain was mild in nature and was more of a heaviness in the left hypochondrium. Patient noticed a lump in left upper abdomen which gradually increased in size. There was no history of sudden increase in the size of lump, fever or colicky pain abdomen. There was past history of blunt abdominal trauma due to fall 5 years earlier which she vaguely remembered.

Examination revealed 15x12cm firm, smooth and globular, intra abdominal lump. Lump was freely mobile side to side and upper limit could not be reached. Spleen was enlarged and tender. There was no free fluid or hepatomegaly and rectal examination was normal. All investigations including blood count, urea, serum electrolytes and liver function tests were within normal limits. Ultrasound abdomen revealed splenomegaly (15.5cm) with 10x10cm well defined hypoechoic intrasplenic mass at the inferior pole. FNAC done showed 20 ml straw coloured fluid with occasional RBC’s and no malignant cells. CT scan abdomen revealed splenomegaly with 12x12cm intrasplenic cystic septate lesion with calcification of cyst wall, suggesting a hydatid cyst spleen (Fig 1). Exploratory laparotomy was done by left paramedian incision which revealed enlarged and freely mobile spleen which could be easily delivered outside the wound (Fig 2). There was a well defined and large cystic lesion on the anteroinferior aspect measuring 12x12cm with shaggy surface and omentum adherent to the anterior surface. Liver, gall bladder and intestines were normal. Cyst was isolated with hypertonic saline packs around the spleen. Wide bore needle aspiration was done and 120ml of blood stained fluid was drained. Deroofing of cyst wall was done and no active bleeder was found in the cavity [Fig. 3]. Omentum was packed into the cyst cavity and wound was closed without drain after haemostasis. Patient had uneventful postoperative period. Oral fluids were started on 2nd postoperative day and the sutures removed on 8th postoperative day. Histopathology revealed pseudocyst of spleen. Patient was discharged and was asymptomatic at last review.

Discussion

Nonparasitic splenic cysts are uncommon, with only around 800 cases described in the literature [3]. Pseudocysts of spleen comprise 70-80% of these. They mostly result from trauma and represent the resolution of a subcapsular or intraparenchymal haematoma, as was probably the case in this patient. There has been a substantial increase in the number of such patients with the increase of number of road traffic accidents and sporting activities [4]. Splenic cysts mostly occur in the younger age group of 20-40 years and females are more often affected [5] as in this case report. The pseudocysts vary in size ranging from 1-16cm and may attain a very large size and contain up to three litres of dark turbid fluid. In 80% of cases the lesion is unilocular, as was seen in this patient. Such large cysts are more prone to injury and complications and may present as acute abdominal emergency.

Post-traumatic cysts are asymptomatic in 30%-60% of patients [6]. Most patients recall a history of trauma as was vaguely remembered by this lady. Symptoms appear only when the cyst increases in size, the most frequent complaint being unpleasant heaviness, fullness and dull pain in left upper quadrant radiating to left shoulder or chest as was noted by this patient. Usual
presentation is a lump in the left hypochondrium. Plain X-ray abdomen may show focal calcification and ultrasound reveals a well defined hypechoic lesion with hyperechoic pattern. CT scan is diagnostic as was in this patient, but it was more in favour of a hydatid cyst. MRI and arteriography were not considered necessary. Surgical management varies depending upon the age of patient, time of onset, presentation and risk of complications [7].

Splenectomy has been the treatment of choice for very large cysts with minimal splenic tissue and is curative. Total splenectomy, which traditionally was the procedure of choice in the treatment of symptomatic nonparasitic splenic cysts, recently has been changed to a more conservative approach. The conservative methods preserve immunologic function of the spleen and prevent the potentially fatal postsplenectomy sepsis complications. Several spleen-conserving surgical treatments have been proposed, especially for treatment of splenic post-traumatic pseudocysts. Conservative treatment in form of resection of cyst bearing portion or deroofing of the cyst with omentoplasty with preservation of the normal splenic parenchyma is considered more acceptable and results are encouraging as in this case study. Splenectomy should be avoided unless in cases of very large cysts with involvement of hilum. Recently, laparoscopic fenestration and modified marsupialization of these cysts using a harmonic scalpel is described.

Post-traumatic splenic pseudocysts constitute most of the secondary cysts and when symptomatic or voluminous require surgical treatment. Recently, there has been a better understanding of splenic function and hence all surgeons should make an effort to preserve splenic tissue.

References