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Case Note

Splenic Epidermoid Cyst

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Abstract
Splenic epidermoid cyst is a rare cystic disease affecting the spleen. We report a young male who presented with a painless abdominal lump. Ultrasonography and CT scan of abdomen showed a huge cystic lesion of obscure origin. At laparotomy a huge cyst was found to be arising from the superior pole of the spleen, and its removal necessitated splenectomy. Histopathological findings were consistent with splenic epidermoid cyst. The aetiopathology and different treatment modalities of splenic cysts are discussed.

Key words: splenic cyst, epidermoid cyst, pseudocyst, splenectomy

Cystic disease of the spleen is not frequently encountered in surgical practice. It is broadly classified as parasitic and non-parasitic, the latter being a rare entity. Non-parasitic cysts are further classified into pseudocysts which lack a true epithelial lining, and true cysts which are lined by an epithelium. Pseudocysts are the commonest non-parasitic cysts and result from resolution of haematoma following trauma. Epidermoid cyst is a rarity among non-parasitic cysts.

Case Report

A fourteen year old male from the Terai region presented to the surgical outpatient with a mass in the left upper abdomen for two years. The patient had no other complaints except for occasional vague abdominal discomfort. He denied having sustained abdominal injuries in the past. On examination a huge tense cystic swelling was present in the left subcostal area, encroaching on to the umbilicus. Baseline laboratory investigations were normal. Ultrasonogram of the abdomen revealed a huge cystic mass of obscure origin in the left upper abdomen.

Computed tomogram of the abdomen (Fig. 1) revealed a huge cyst with partly calcified wall, which was displacing the spleen inferiorly.

At laparotomy a huge tense cyst measuring 18 x 20 cms occupying most of the left upper peritoneal cavity was detected. The normal splenic parenchyma (Fig. 2) was reduced to a small ridge along the inferolateral part. The cyst was thick-walled with thickness measuring up to 1.5cm which contained brownish fluid. Splenectomy was done and the patient made an uneventful recovery. The patient received *pneumovac*® vaccine immediately after the operation.

Microscopic examination (Fig. 3) revealed compressed splenic tissue in most of the cyst wall with mild sinusoidal congestion. The cyst lining was mostly flattened, with focal areas lined by stratified squamous epithelium. The wall of the cyst consisted of fibrous tissue with focal mild inflammation and macrophages at sites of epithelial denudation. The final diagnosis of splenic epidermoid cyst was made.

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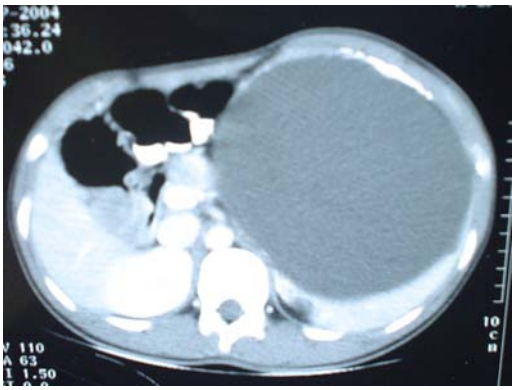

Fig 1: Axial computed tomogram showing huge splenic cyst with wall calcification

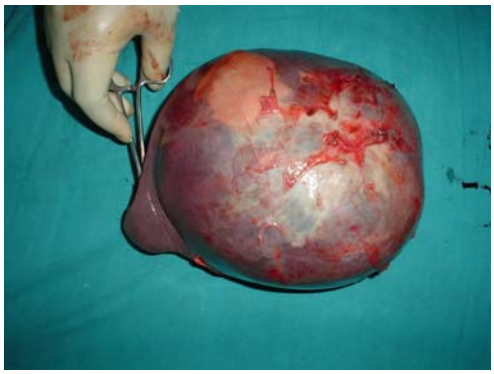

Fig 2: Large splenic epidermoid cyst

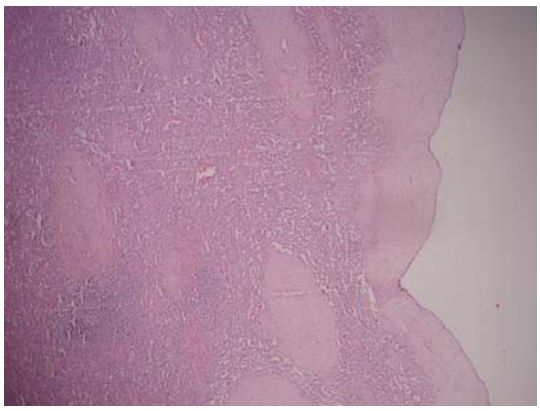

Fig 3: Microscopic view – compressed splenic tissue and stratified squamous lining.

Discussion

Non-parasitic cystic lesions are among the unusual lesions of spleen. In an autopsy series of 42,327 autopsies over a period of 25 years, Robbins et al reported only 32 cases of splenic cysts[1]. The first report of a splenic cyst was done by Andral in 1929[2]. Subsequently, Fowler in 1953 reported a series of 265 cases of non-parasitic splenic cysts[3]. Since then, many isolated case reports of non-parasitic splenic cysts have appeared in the world literature.

Most of the non-parasitic cysts are benign epithelial cysts, but malignant cysts and metastases with cystic degeneration are encountered rarely. The epidermoid cysts constitute 10% of all benign non-parasitic cysts[1]. The lining of the cyst in our case was stratified squamous, which suggested that the cyst was epidermoid.

Secondary cysts (pseudocysts) are thought to result from splenic trauma. However, the existence of the so-called post-traumatic pseudocysts has been questioned by Burrig[4] and Morgenstern[5]. According to Burrig the absence of an epithelial lining can be a spurious observation, as he had found areas without cellular lining in epithelial cysts. The gross appearance of most of these cysts is the same whether or not an epithelial lining is demonstrated on histological sections. Many of the so-called pseudocysts, ascribed to antecedent trauma, reveal remnants of epithelial lining, if sufficient sections are taken and studied with perspicacity. In our case there was no history of trauma which made the possibility of pseudocyst unlikely.

The aetiology of splenic epidermoid cyst is largely conjectural, but it is widely held that inclusion of splenic surface mesothelium into the splenic parenchyma occurs during development with gradual growth in size, either from proliferation of the lining cells, or an accelerated secretion of lining cells from an unknown cause[5].

Most of these cysts remain asymptomatic until they acquire a size of 5cm or more. Most of the patients become symptomatic in the second or third decade of life; our patient became symptomatic in the second decade. Commonly reported symptoms include upper abdominal fullness, dull pain, and left upper quadrant enlargement. The cysts could rupture with abdominal trauma, or rarely, spontaneously, with ensuing peritonitis. Other rare complications include infection, haemorrhage within the cyst, hypertension due to renal compression, hypersplenism, and even malignant degeneration[5]. Apart from the occasional abdominal discomfort, our young patient had none of these complications.

The characteristics of the cyst and its origin can usually be established by ultrasonogram, CT scanning, or MRI. Wall calcification noted in cysts of long duration, does not distinguish between true and secondary cysts[6]. Our case also had wall calcification, which indicates that the cyst was probably of long duration (Fig.1). Echinococcal serology is usually done to exclude hydatid disease. We did not have facilities for echinococcal serology, but made necessary arrangements to deal with hydatid cyst during operation. The conventional treatment of splenic epidermoid cyst has been splenectomy. Jules Pean, a French surgeon, was the first to attempt excision of splenic cyst in 1867, but he had to do splenectomy on account of excessive bleeding[5]. With the recognition of the role of spleen in immunologic function, various alternative treatments have been tried. These include: aspiration and sclerotherapy, partial splenectomy, partial cystectomy (decapsulation), and laparoscopic partial cystectomy.

Small cysts less than 5cms, asymptomatic cysts, and cysts showing regular cyst wall without solid components can be left untreated[5]. In our case the cyst was 18 x 20 cms, symptomatic hence, it needed surgical intervention. Aspiration of the cyst contents with injection of sclerosants such as tetracycline or alcohol have been tried, but recurrence is the rule. These measures should be used only as a temporizing measure[5]. Even marsupialization of the cyst is associated with a high incidence of recurrence, and is not recommended[5]. Partial splenectomy could have been another option but we did not consider it because there was no adequate splenic parenchyma left. Laparoscopic partial splenectomy with the use of harmonic scalpel[7], radiofrequency haemostatic devices[8], and omental packing, are different procedures which are being utilized in surgical management[9].

Conclusion

Though splenic epidermoid cyst is an uncommon entity, it should be considered in the differential diagnosis of an abdominal mass in a young individual. An attempt should be made to preserve the spleen provided there is adequate parenchyma otherwise splenectomy is the rule.

Referneces

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