

Epidermoid Cyst of the Spleen in a Child (About an Exceptional Case Report)

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DOI: [10.36347/sjams.2019.v07i09.054](https://doi.org/10.36347/sjams.2019.v07i09.054)

| Received: 20.09.2019 | Accepted: 27.09.2019 | Published: 30.09.2019

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Abstract

Original Research Article

Splenic epidermoid cysts are rare non-parasitic true cysts affecting the spleen. We report an eleven-year-old child who presented with an abdominal lump associated with pain of 6 months. Ultrasonography of the abdomen showed a huge cystic lesion of the spleen which was confirmed by an abdominal CT. At laparotomy, a huge unilocular cyst involving upper part of spleen containing pultaceous fluid was seen and its removal necessitated a partial splenectomy. Histopathological findings were consistent with splenic epidermoid cyst. Thus histopathology helped in elucidating the etiology and diagnosis.

Keywords: Spleen, true cyst, epidermoid, child.

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INTRODUCTION

Splenic cysts are rare. They may be congenital, neoplastic, vascular, inflammatory and posttraumatic in origin and may contribute to 30-40% of the total splenic lesions [1]. Congenital splenic cysts are usually asymptomatic and they are rarely seen in the routine surgical practice. Also, due to lack of typical clinical presentation, they are discovered incidentally. Splenic epidermoid (congenital) cysts constitute approximately 10% of total cysts and they are encountered more commonly in children and young adults. Their prognosis is good. The traditional treatment of splenic cysts had been splenectomy, but during the past decade, it was observed that splenectomy led to short and long-term complications. Presently, the emphasis is being laid on conservation of spleen, especially in children and young adults, in order to avoid overwhelming post splenectomy infections [2]. However, not all splenic cysts can be treated by partial splenectomy [3].

We are reporting a case of a large splenic epidermoid cyst- a rare type of splenic cyst, which was removed by open partial splenectomy.

MATERIELS & METHODS

Our work consists of a case report concerning an eleven-year-old child, followed in the Pediatric Visceral Surgery Department "A" at the Children's Hospital of Rabat.

The purpose of this study is to analyze the characteristics of such a location on the clinical and radiological plan, to discuss the choice of the surgical procedure and to study the best time of surgery.

CASE

11-year-old girl with no particular pathological antecedents, no notion of consanguinity, without history of injuries admitted for an abdominal pain whose history dates back to 6 months before admission with progressive intensity in the last month.

The clinical examination finds a tenderness and a palpable mass in left flank without any definite margins. This mass was mistaken for a splenomegaly. An ultrasound showed a suspicious cyst of the spleen (Figure-1).

Base line laboratory investigations including haemoglobin, complete blood count were normal. Indirect haemagglutination test and enzyme-linked immunosorbent assay for detection of anti-*Echinococcus* antibodies were negative.

We realised an abdominal CT (Figure 2 & 3) who showed a Cystic formation rounded, unilocular thin walled, not raised after injection of the contrast medium, containing neither partitions nor vegetations, measuring 49x62 mm. Aspect evoking an epidermoid cyst.

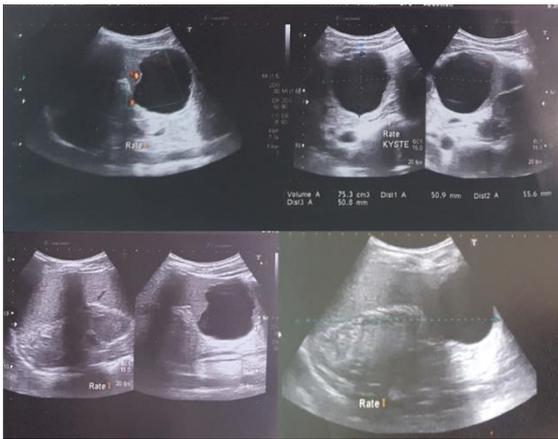


Fig-1: Abdominal ultrasonography showing a cyst of the spleen

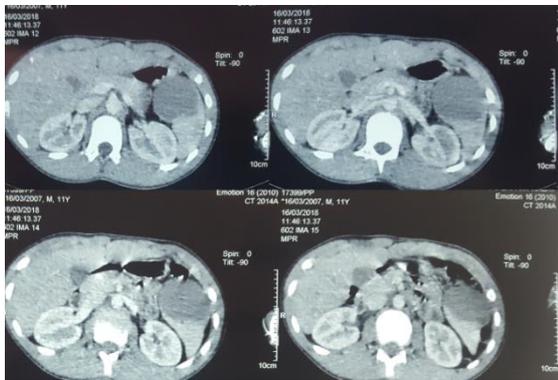


Fig-2: Abdominal CT showing a giant process of the spleen in favor of a cyst



Fig-3: Abdominal CT showing the cyst of the spleen

RESULTS

Surgical exploration revealed a cyst at the lower pole of the spleen (Figure-4). After locating the pedicle of the lobe containing the cyst, a partial splenectomy was performed (Figure-5). Postoperative

follow-ups are simple. The evolution in the short and long term is good.



Fig-4: Intraoperative aspect of the cyst of the spleen



Fig-5: Partial splenectomy taking away the spleen cyst

DISCUSSION

Cystic lesions are among the unusual lesions of spleen which include parasitic and non-parasitic cysts. The non-parasitic cysts are still rarer and divided into true cysts having an epithelial lining (epidermoid, dermoid and mesothelial) or endothelial lining (haemangioma, lymphangioma) and secondary (pseudocysts/nonepithelial), which are generally of post-traumatic origin [4, 5]. Robbins et al., in an autopsy series of 42,327 autopsies conducted over 25 years reported only 32 cases of splenic cysts [6]. Elias and Evangelos recently reported three cases of splenic cysts; one lymphangioma, one post-traumatic and one epidermoid cyst [7]. True cysts account for around 10% of non-parasitic cysts, but they are the most frequent type of splenic cysts in children [8]. In our case cyst was lined by stratified squamous epithelium revealing its true nature.

Secondary cysts (pseudocysts) are thought to result from splenic trauma (resolving haematoma), inflammation (post pancreatitis walled off necrosis), or vascular insult (cystic change post infarction) to the spleen. Burrig and Morgenstern questioned the existence of the post-traumatic pseudocysts. According to Burrig, 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 [9, 10]. In our case

there was no history of trauma which made the possibility of pseudocyst unlikely.

Epidermoid cysts are thought to arise from inclusion of splenic surface mesothelium into the splenic parenchyma during development. Mostly asymptomatic these cysts cause symptoms only if they acquire a size of 5cm or more by the second or third decade of life; though our patient became symptomatic in the first decade. Common symptoms are dull aching pain with left upper quadrant fullness. Complications include rupture with abdominal trauma, hypertension due to renal compression, infection, hypersplenism, haemorrhage within the cyst and even malignant degeneration [10]. In our patient abdominal tenderness was present along with pain.

The differential diagnosis could be splenic lesions like lymphangioma, haemangioma, hydatid cyst, bacterial abscess, cystic metastasis and intrasplenic pancreatic pseudocyst. Radiological investigations like ultra-sonogram, CT scanning or MRI may help in identifying the morphology, composition of cystic fluid and their location in spleen but the final diagnosis depends on the histopathological examination of the cyst [11-13]. The epidermoid cyst exhibits unique gross features with a grey white, smooth and glistening wall having prominent trabeculations [10]. The cyst contains thin to viscid, colourless to brownish fluid. Histologically it is characterised by squamous epithelial lining or a single layer of flattened epithelium without skin appendages. Desquamation of epithelium may lead to loss of lining in some portions of wall. Flattened lining may be mistaken for the endothelium. Positivity for CK and negativity for factor 8 may help in differentiating between the two [14]. Calcifications of both the primary and secondary cysts are frequently found, which are useful in diagnosing cysts from other causes of splenomegaly [11].

The conventional treatment of splenic epidermoid cyst has been splenectomy. Alternative treatments include: aspiration and sclerotherapy, partial splenectomy, cyst decapsulation (unroofing) and laparoscopic partial cystectomy [15]. Small asymptomatic cysts less than 5cm are generally left untreated [10]. In our case the cyst was 49x62mm, symptomatic hence, it needed surgical intervention. As many authors, we think that the conservative surgery is the best treatment, preferentially partial splenectomy [16]. The disposition of metameric vascularization and polar position squamous cyst (as is the case in our case report) condition the possibilities of realization of the splenectomies partial set. This conservation of the parenchyma preserves the immunological function of the spleen [17].

CONCLUSION

Splenic epidermoid cysts are rare benign tumors which are usually asymptomatic. Ultrasound and computed tomography scan are often sufficient to reach the diagnosis which is confirmed by histopathological examination. Conservative surgery is the best treatment.

Conflict of Interest: All the authors declare that they do not have any conflict of interest.

Author's Contribution: All the authors have contributed to the redaction of this manuscript.

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