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A Giant Epidermoid Splenic Cyst in a Teenage: A Case Report

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Abstract

Introduction: Splenic cysts are rare and are either primary or secondary. Epidermoid splenic cysts are an example of primary congenital cysts. Most often, they are asymptomatic discovered incidentally, but they may present with abdominal discomfort predominantly at young female age. **Case presentation:** We have reported a case of 14 -years- old girl presented with intermittent abdominal pain. The physical examination revealed a palpable mass in the left hypochondriac region. Ultrasonography and computed tomography of the abdomen showed a giant unilocular splenic cyst without a clean wall. Operative treatment was necessary, and at laparotomy, a huge cyst was found. A partial splenectomy was performed. The diagnosis of a splenic epidermoid cyst was confirmed with histological examination. **Conclusion:** Splenic cysts are not frequent especially in children and adolescents. Imaging is useful for diagnosis. The confirmation of the diagnosis is histological. Different treatment modalities are discussed. However, partial or total splenectomy remains a relatively safe procedure, associated with few complications and avoiding any future problems.

Keywords: Conservative Treatment, Surgery, Splenic Cyst, Teenage

1. Introduction

Splenic epidermoid cysts are a congenital benign mass of the spleen (Pastore, Bartoli 2014; Da Costa, Gaujoux, Gouya, Dousset, Legmann 2015). They belong to the non-parasitic primary cysts that constitute approximately 10%-25% (Kiran, Balachandran, Mohan 2017; M. Zganjer, V. Zganjer and Irenej Cigit 2010). Splenic epidermoid tumors are well histologically described entity. These cysts are often asymptomatic, sporadic and discovered incidentally in childhood or adolescence.

The traditional treatment of splenic cysts had been total splenectomy led to short and long-term complications especially in children. Currently, it is recommended to practice a conservative surgical treatment (Rana, Kaur, Singh, Malhotra, Kuka 2014). However during the last two decades, new interventional radiological approaches are starting to be tried (López et al. 2017; Accinni, Bertocchini, Madafferi, Natali, Inserra 2016)).

We reported a rare case of large splenic epidermoid cyst in a 14-year-old girl with conservative surgical treatment.

2. Case presentation

A 14-year-old girl, with a history of abdominal trauma, presented intermittent left hypochondriac pain. She was admitted in our department for exacerbation of the pain. Physical examination revealed a firm and painful mass in the left hypochondriac region.

Ultrasonography (US) of the abdomen revealed a huge intra splenic cyst that measured 142*113 mm. Computer Tomography (CT) scan of abdomen confirmed the presence of a large well defined cystic mass which was 145*143*118 mm in size. The lesion was not raised after injection of contrast medium. The wall of the lesion was imperceptible (fig 1).

The inflammatory biological test was negative. The hydatid serology was negative. Elective laparotomy was performed. On exploration, we found a large splenic cyst which was located at the posterior face of the spleen. The cyst doesn't have a regular wall (fig2). Reduction in size of cyst was done by intraoperative aspiration of about 1 liter of turbid colored fluid (fig 3). A conservative surgical treatment was performed, and we practiced a partial cystectomy with inserting a suction drain (fig 4). The postoperative clinical course of the patient was satisfactory and uneventful. The diagnosis of a splenic epidermoid cyst was confirmed with histological examination.

3. Discussion

Splenic cysts are rare and not often encountered in surgical practice especially in the pediatric age (Czauderna et al. 2006). They are classified as true or primary cysts and false post-traumatic cysts (Martin 1958)). Primary cysts have an epithelial lining and can be non-parasitic or parasitic. In fact, Echinococcus infection is the most common cause of a primary splenic cyst especially in endemic countries (Kiran et al. 2017; Etsakayannis, Harry, Wkozakewich, Cshamberger 1995). Non-parasitic cysts are neoplastic or congenital which are classified as epidermoid, dermoid and endodermoid depending on the type of lining.

Splenic epidermoid cysts are a benign tumors that histologically characterized by the presence of a stratified columnar, cuboidal or squamous epithelial lining (Schlittler; Dallagasperina 2010). Usually, they are solitary, unilocular, and contain a serous fluid which is often blood-stained (Thomas and Taiwo 1994, Sarvaiya, Raniga, Vohra, Sharma, Bhryan 2006).

Epidermoid cysts are the most common among all congenital cysts which occur in the spleen (Tassopoulos, Wein, Segura. 2017). Their etiopathogeny still unknown and several hypotheses have been proposed (Schlittler; Dallagasperina 2010, Sarvaiya et al. 2006). The most of epidermoid splenic tumors are asymptomatic and discovered incidentally in childhood or adolescence with a female predilection. But may become sometimes symptomatic who testify for complication by compression, infection, trauma or haemorrhage (Da Costa et al. 2015, Accinni et al. 2016). In these cases, we find an acute abdomen with or without a palpable mass.

In our case, the patient presented dull pain in the left costal margin for the last years with a history of trauma. Imaging often poses the diagnosis which is confirmed by the anatomopathological analysis. In fact, US and CT scan are the most useful examination to find the correct diagnosis. Also, the interventional radiology finds its place in the treatment and oversight of these cysts. In our case, the US of the abdomen and CT scan have oriented the diagnosis.

According to the literature, for asymptomatic and smaller splenic cysts (<5cm diameter) a simple clinical and radiological oversight can be a safe approach. Whereas for symptomatic or larger cysts (>5 cm in diameter), surgical intervention has been suggested (Czauderna et al. 2006, Sinha, Agrawal. 2011). The conventional treatment of these symptomatic splenic cysts was a total splenectomy. But today, the splenic surgery treatment is more conservative with preservation of the spleen if possible especially in children and adolescent in order to avoid serious postoperative infections (Accinni et al. 2016, Czauderna et al. 2006). The various splenic surgery procedures described in the literature are total or partial splenectomy and total or partial cystectomy whether with laparoscopy or laparotomy.

Sinah (Sinha, Agrawal. 2011) presented a systematic study on 157 non-parasitic splenic cysts treated with various surgical procedures. This review found that the recurrence rate with the laparoscopic partial and total cystectomy was unacceptably high. However, total cystectomy with open approach did not show high recurrence and hence proved to be an acceptable option. Also, they indicated a total splenectomy if the cyst was giant or multifocal. Evenly Czauderna (Czauderna et al. 2006) presented a multicentric study about 50 non-parasitic splenic cysts treated with different surgical procedures. This study noted recurrence only with the laparoscopic partial cystectomy. In fact, several authors recommended a partial splenectomy or cystectomy as soon as possible. But total splenectomy is the treatment of choice in case of larger cysts, as it prevents serious complications like rupture, haemorrhage, infection and recurrence (Rana et al. 2014; Schlittler, Dallagasperina. 2010). In our case, we opted for conservative surgical treatment, and we practiced a partial cystectomy.

Recently, a more conservative approach is developed <Splenic sclerotherapy> which is a potentially less invasive treatment for splenic cysts than surgery (Rifai et al. 2013). Several studies (López et al. 2017, Czauderna et al. 2006, Tassopoulos et al. 2017) have concluded that this technique is an effective initially alternative therapy predominately for the pediatric population and does not exclude surgery if this conservative treatment fails.

4. Conclusion

Splenic epidermoid cysts are benign tumors that their treatment must be as conservative as possible. Radiological examinations have a diagnostic and therapeutic interest. However, the confirmation of the diagnosis is histological. The total splenectomy was the gold standard, and recently several conservative approaches are developed.

FIGURES



Figure 1: Dimensions of the splenic cyst on the CT scan

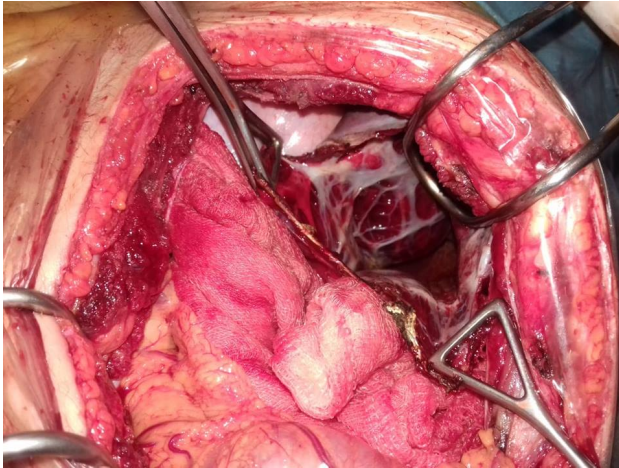


Figure 2: Intraoperative view of the cyst cavity



Figure 3: Ponction of the cyst

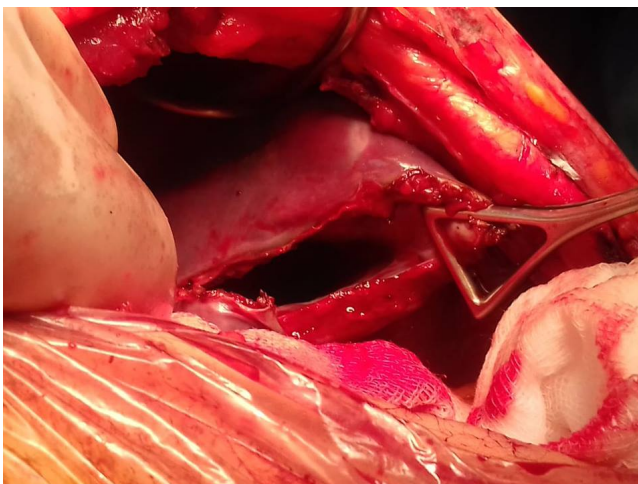


Figure 4: Partial cystectomy

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