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Journal of Surgery

Machain GM, et al. J Surg: JSUR-1123.

Case Report

DOI: 10.29011/2575-9760.001123

Epithelial Splenic Cyst: Diagnosis and Therapeutic

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Citation: Machain GM, Sosa E, Melgarejo S, Paez L, Escobar A (2018) Epithelial Splenic Cyst: Diagnosis and Therapeutic. J Surg: JSUR-1123. DOI: 10.29011/2575-9760.001123

Received Date: 29 March, 2018; **Accepted Date:** 13 August, 2018; **Published Date:** 17 August, 2018

Summary

Non-parasitic splenic cysts are infrequent, usually a casual finding or occasionally it presents with compressive or abdominal growth symptoms. The auxiliary methods of diagnosis are abdominal ultrasound and abdominal Tomography (CT). The histological finding defines its classification depending on the presence of epithelial lining and the type of content of the cysts. The therapeutic options depend on the clinical manifestations and the morphological characteristics of the cyst.

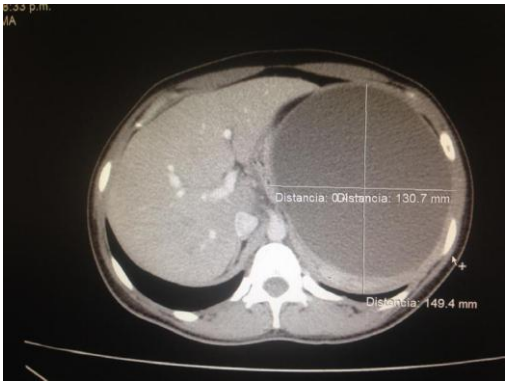
Keywords: Epithelial Splenic Cyst; Non-Parasitic Splenic Cyst; Splenectomy

Introduction

Splenic Cysts are typically asymptomatic and are infrequent casual findings, their incidence is 0.75 per 100,000 [1,2]. They are classified according to Martin in Type I, primary or real, which are cysts with epithelial lining and which may or may not be parasitic. At the same time, the non-parasitic types are classified as type I if are congenital, vascular or neoplastic and type II if secondary or pseudocysts, since they do not have an epithelial lining. They occur more frequently in the 2nd and 3rd decade of life, but may appear in other age ranges [3]. Parasitic cysts are the most frequent and most of them correspond to hydatid cysts. As for the epithelial cysts, the real ones (with epithelium) are the least frequent [4]. The most useful diagnostic method is abdominal ultrasound [5], which reinforces the abdominal CT diagnosis and laboratorially there may be elevated tumor markers. The therapeutic options depend on the development of symptoms, the size, and the location of the lesions. The treatment of non-parasitic spleen cysts currently aims to preserve parenchyma and splenic function due to possible immunological complications [6].

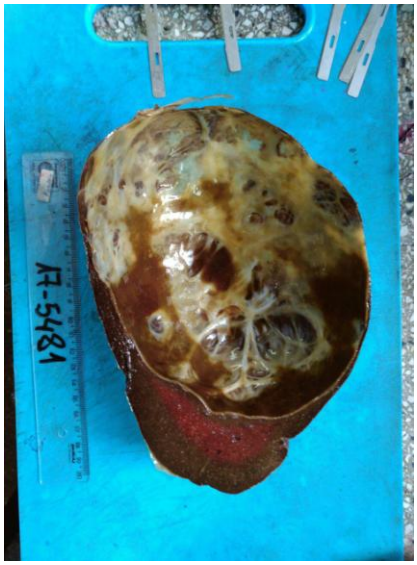
Clinical Case

A 26-year-old female patient with 8 days of pain in left hypochondrium with a fever graduated in 38°C in two occasions, (which is medicated with paracetamol VO and relents and nausea on several occasions, without vomiting. She denies any trauma history. Laboratory to hydatid cysts was borderline. Ultrasound and color Doppler ultrasound showed the existence, at the tail of the pancreas, of a cystic formation of approximately 180 x 55 mm, with internal echoes and fine septa, without color Doppler flow, in close relation with the spleen and the left kidney. A CT scan with abdominal contrast showed this formation and its morphological characteristics are observed (Figure 1).



The patient underwent a conventional splenectomy where the diagnosis was a splenic cyst. The surgical specimen consisted of the 560 grams spleen, which measured 18.5 x 14.5 x 12 cm, with an external surface with brown with beige-brown heterogeneous areas (Figure 2).

When cut, a multilocular cystic cavity was observed, measuring 18.5 x 14 cm, with irregular walls and aqueous green content. The rest of the splenic parenchyma was brownish, homogeneous of solid-soft consistency (Figure 3).



The histological finding was a cystic formation, covered by stratified squamous epithelium, with fibrous thickened walls, presence of granulation tissue and macrophages with intracytoplasmic haemosidecic pigment and hyperplasia of the red and white pulp (pathological anatomy) (Figure 4).

Discussion

A true non-parasitic splenic cyst cannot be distinguished clinically from other types of cysts. They have an inner lining of epithelial cells and are usually congenital. Pseudocysts have a connective tissue lining and are usually secondary to closed trauma or hemorrhage of the splenic parenchyma, but they may also be of infectious or degenerative origin. The pseudocysts do not have an epithelial wall [7]. Two third of the cases of splenic epithelial cysts are reported in patients under 40 and 60 percent are women. In the related literature, cases have been reported in pregnant women only four times [8]. The most frequent form of presentation, is an asymptomatic mass found after abdominal examination for any other reason. If it is symptomatic, it usually occurs in the form of abdominal discomfort due to the growth of the cyst and the compression of adjacent structures. We must keep this entity in mind as a differential diagnosis in children and young adults who have persistent abdominal discomfort of not clarified cause [1-9].

Ultrasound diagnosis of an epidermal cyst of the spleen could be demonstrated by the presence of internal echoes, it has a liquid content with subsequent acoustic reinforcement and contains multiple internal echoes that are mobile and are attributed to the presence of crystals and particles of Keratin, its margins are irregular due to the trabeculations in its wall [5]. In a Computed Axial Tomography (CT) of the abdomen, splenic cystic lesions are spherical, well defined, with attenuation equivalent to water, with a thin capsule, imperceptible, in a series, trabeculations or peripheral septa were found in the cystic wall in 86% of true cysts (higher percentage than false cysts) and calcifications in 14% of them (lower percentage than in false cysts) [3] when sonographic

and tomographic findings are doubtful, Magnetic Resonance (MRI) can be used, epidermal cysts show traits common to all cystic lesions, with sequences with low intensity in T1 and marked signal intensification in T2 sequences indicating fluid density, and absence of enhancement with gadolinium administration [5].

Another clinical fact of great interest is the production of Ca 19.9 by squamous cells that line the inner wall of the cyst and diffuse through the capillaries of the connective tissue of the same to the systemic circulation, resulting in high concentrations of serum CA 19.9. This high concentration of the aforementioned antigen, also present in certain digestive tumors, may sometimes make it necessary to rule out the presence of a basic oncological disease associated with the presence of the splenic cystic lesion. In any case, all the studies that present similar cases reflect a normalization of CA 19.9 serum levels between 30-60 days after the intervention [9]. Cases of CEA elevation [1] are also described So it is necessary to rule out any type of concomitant pathology in the digestive system. Regarding the differential diagnosis, when a nodule is detected in the left hypochondrium it is necessary to exclude diseases associated with splenomegaly such as mononucleosis, hemolytic anemia, leukemia, collagen diseases and liver pathologies that cause portal hypertension [3].

The low frequency of splenic cysts has limited the obtaining of consensus with definitive criteria for its management. Although a limit supported by the evidence has not been defined, there is some agreement that lesions smaller than 5 cm in diameter and asymptomatic should be treated conservatively by follow-up. For those that reach a larger size or have clinical manifestations, the treatment should be surgical because of the risk of complications, such as rupture, hemorrhage or infection [6]. Conservative options (percutaneous aspiration or sclerosis) do not result in good long-term control. Some studies have shown that splenic cyst sclerosis was successful with lesions up to 11 mm, not in larger lesions. The surgical options are partial splenectomy (preservation of more than 25% of the splenic parenchyma, minimum needed to preserve the immune function without increasing risk of recurrence of the cyst, total cystectomy, marsupialization, by laparoscopic or open approach [6] Factors such as the age of the patient, the location and nature of the cyst should be evaluated at the moment of drawing up a surgical plan and, above all, when considering conservative interventions of the splenic parenchyma.

Partial splenectomy is a possible procedure but difficult to achieve because it requires a complex management of the intraparenchymal vasculature [6]. It can be an alternative when the lesions are deep and respect the anatomy of one of the splenic poles, but could produce hemorrhages difficult to control and eventually require a total splenectomy. The marsupialization of the cyst implies the separation of the entire wall from the splenic parenchyma and would not have recurrence risk, but it would make hemostasis more difficult. The methods of partial cystectomy, in which only one segment of the capsule is resected, and a permanent communication is created between the cystic cavity and the peritoneal cavity, can be performed laparoscopically, but would have as a disadvantage a greater recurrence. However, if the removal of a significant percentage of the wall is assured and even associated with an omentoplasty, good results have been described, probably being the technique of choice for superficial cysts. In splenic surgery, the current approach is the laparoscopic approach. Its benefits have been widely discussed in the literature and in the cohort described, patients who underwent laparoscopy had a significantly shorter hospital stay [6].

References

1. Gustavo Machaín, Jose A Zenteno, Jorge Alfonso, de Zenteno, I Cán-dida, et al. (2006) Quiste esplénico. Reporte de caso.- An. Fac. Cienc. Méd XXXIX - Nº 1: 42-45.
2. Sadeghi A, Naderpour Z, Ebrahimpur M, Saffar H (2017) Non-parasitic Splenic Cyst. Middle East J Dig Dis 9: 242-243.
3. Schilttler L, Dallagasperina V (2010) Non-parasitic splenic cyst cistos esplénicos näo-parasitarios. Rev Col Bras Cir 37: 442-446.
4. Añón Requena MJ, Pérez Requena J, Palomo González MJ, Guerrero Cauqui R (2004) Quiste epidermoide esplénico presentación de un caso. REV ESP PATOL 37: 449-452.
5. C. Da Costa et al. (2017) Epidermoid splenic cyst. Diagnostic and Interventional Imaging 96: 417-420.
6. Sáez J, Villarroel A, MejíR, Sharp A (2017) Quiste esplénico no parasitario: revisión de la experiencia en un hospital clínico universitario. Rev Chil Cir 69: 315-319.
7. Macheras A, Misiakos EP, Liakakos T, Mpistarakis D, Fotiadis C, et al. (2005) Non-parasitic splenic cysts: A report of three cases. R World J Gastroenterol November 11: 6884-6887.
8. Gutiérrez Sánchez JO, Vélez Vargas DR, Pineda Bolívar PA (2007) Quistes esplénicos no parsitarios. Reporte de un case 2007.
9. Pérez Martín, M, Velasco Fernández C, Barrera Rebollo A, Gonzalo E (2005) Quiste epitelial esplénico: caso clínico y revisión de la literatura. 7º Congreso Virtual Hispanoamericano de Anatomía Patológica, setiembre 2005.