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Splenic mesothelial cyst: a case report

Ugur Kesici, Mustafa Ayvazoglu, Yigitcan Celik, Orhan Yalcin

Department of General Surgery, "Prof. Dr. Cemil Tascioglu" Training and Research Hospital, University of Health Sciences, Istanbul, Turkey

Ugur Kesici **ORCID ID:** 0000-0001-7457-6625
Mustafa Ayvazoglu **ORCID ID:** 0009-0001-7015-8386
Yigitcan Celik **ORCID ID:** 0009-0004-6914-8721
Orhan Yalcin **ORCID ID:** 0000-0002-2013-7843

ABSTRACT

Splenic cyst was first described by Andral in 1929. Splenic cysts are divided into 2 groups as parasitic and non-parasitic. Splenic mesothelial cyst (SMC) is a rare form of splenic cysts, and its incidence is not known exactly. It is frequently observed in children and young adults. In this case report, a 21-year-old male patient who underwent laparoscopic splenectomy with a diagnosis of symptomatic splenic cyst is discussed. Total splenectomy was decided because of the splenic cyst localization in the splenic hilus. Laparoscopic splenectomy was performed to the patient. SMC is a rare primary splenic cyst and is usually asymptomatic. It is often detected incidentally by imaging modalities. Symptomatic cysts with a size of more than 5 cm should be treated. Spleen sparing techniques are accepted as the current treatment option. In this case report, a young adult patient who underwent laparoscopic splenectomy for symptomatic SMC is discussed in the light of the literature.

Keywords: spleen, mesothelial, primary, cyst, splenectomy

INTRODUCTION

Splenic cyst was first described by Andral in 1929. Splenic cysts are divided into 2 groups as parasitic and non-parasitic. The non-parasitic ones are divided into 2 groups as primary (epithelial/true) and secondary (false/pseudo) cysts. The parasitic ones are frequently observed in endemic regions due to *Echinococcus granulosus* infestation [1]. Primary cysts may be of congenital or neoplastic origin. They are lined with mesothelial, squamous or transitional epithelium [2]. Splenic mesothelial cyst (SMC) is a rare form of splenic cysts, and its incidence is not known exactly. It is frequently observed in children and young adults [3]. Although the mechanism of SMC formation is not clearly known; capsular surface mesothelial invagination, embryonic incorporation of epithelial cells from neighboring structures or epithelial cell metaplasia or formation of vascular endothelium from peritoneal inclusions are theories proposed to explain the formation of congenital cysts [1].

In this case report, a young male patient in whom SMC was detected after laparoscopic splenectomy for symptomatic splenic cyst is discussed.

CASE REPORT

In this case report, a 21-year-old male patient who underwent laparoscopic splenectomy with a diagnosis of symptomatic splenic cyst is discussed. In the anamnesis of the patient, it was learnt that he had complained of pain in the left upper quadrant for about 2 years and required analgesic use for the last 6 months. An incidental 21 mm septal splenic cyst was detected on abdominal USG performed in an external center 4 years ago due to nonspecific abdominal pain. In the external center, where the patient was admitted with complaints of left upper quadrant pain for the last 2 years, a 51×43 mm lobule contoured splenic cyst with septa was reported on abdominal CT. The patient had a 50×57 mm splenic cyst with lobule contour, containing hyperintense septa-

Corresponding authors:
Ugur Kesici
E-mails: ugurkesici77@mynet.com

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tions in T2A sequences and hypointense septations in T1A sequences in the central part of the spleen on MRI examination performed because of abdominal pain that had been aggravated for the last 6 months. The abdominal magnetic resonance imaging (MRI) image of the patient is shown in Figure 1.

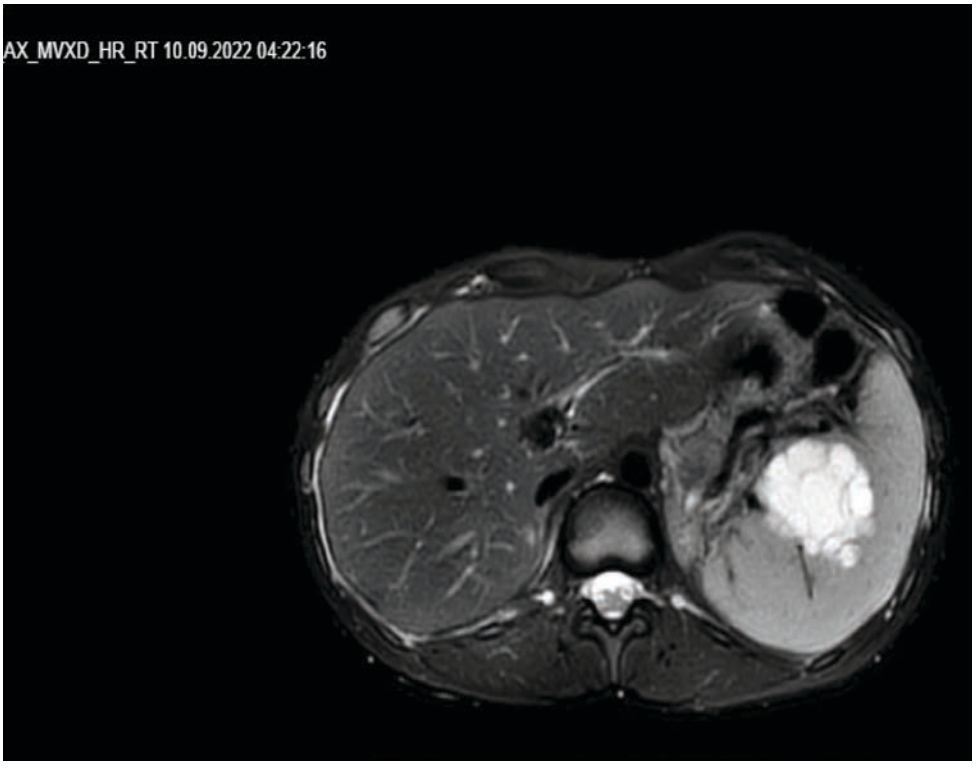

FIGURE 1. MRI image of the patient's abdomen

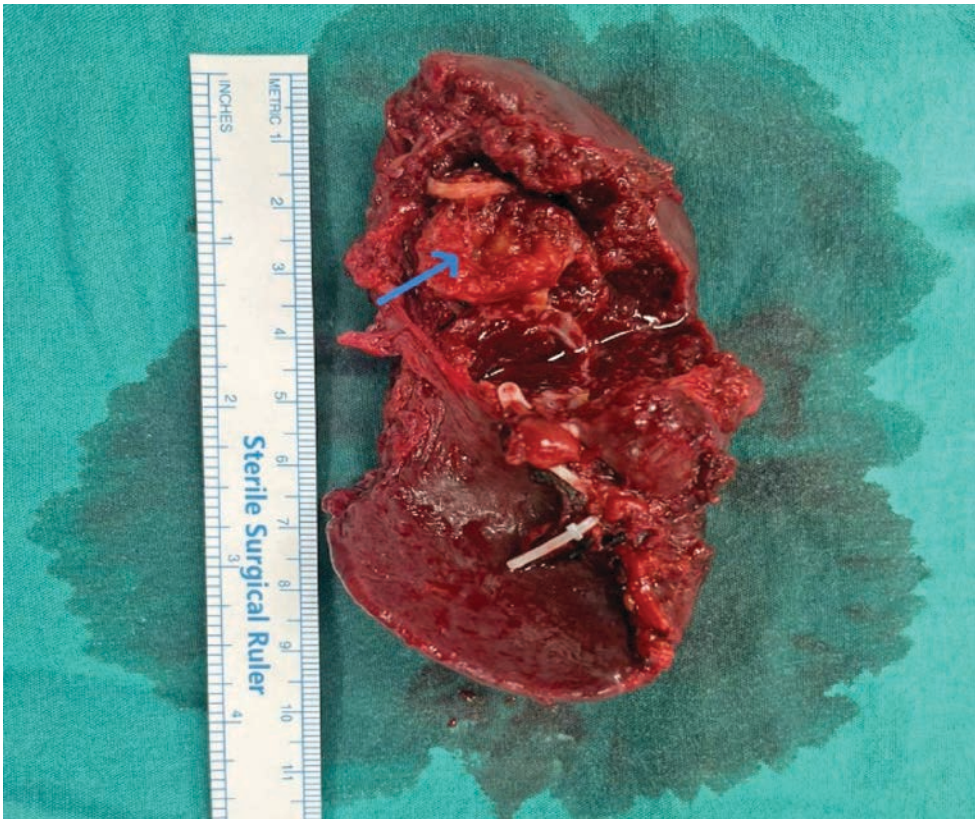

FIGURE 2. Image of the patient's splenectomy specimen

Surgery was planned with the diagnosis of symptomatic splenic cyst. *Echinococcus* indirect hemagglutination test was reported as negative. Preoperative laboratory tests were normal. Total splenectomy was decided because of the splenic cyst localization in the splenic hilus. Laparoscopic splenectomy was performed to the patient. The splenectomy specimen of the patient is shown in Figure 2.

No complications were observed in the perioperative and postoperative period. The patient was discharged on the 2nd postoperative day. It was informed that the preoperative pain symptom completely disappeared in the follow-ups of the patient.

DISCUSSIONS

Primary splenic cysts are frequently seen in children and young adults. Clinically, they usually have an asymptomatic course. However, when their sizes increase, they may present themselves with regional or radiating pain, compression symptoms and rarely thrombocytopenia [1,4]. In the patient in this case report, it was observed that the patient had a symptom of regional severe pain with increase in dimension. Thrombocytopenia was not detected in the patient's laboratory parameters. Preoperative diagnosis of SMC is quite difficult. However, SMC should be considered if trauma, splenic infection, and hydatid cyst are excluded [1]. In this patient, primary splenic cyst was primarily considered because of the absence of a history of trauma and infection and negative *Echinococcus* indirect hemagglutination test. Since primary splenic cysts are usually asymptomatic, they are frequently

detected incidental to USG, CT and MRI imaging modalities performed for another reason [3]. In the patient in this case report, an asymptomatic splenic cyst measuring approximately 2 cm was detected as incidental in abdominal USG and CT scans performed approximately 4 years ago. The patient underwent laparoscopic splenectomy because the cyst size was over 5 cm on abdominal MRI imaging which was performed because of recently increasing left upper quadrant pain and pain symptoms.

Hydatid cysts, lymphangioma, hemangioma and epithelial cysts should be considered in the differential diagnosis of SMC [3]. Treatment of all symptomatic SMCs with a size ≥5 cm is recommended. Because it has been reported that risk of rupture, hemorrhage and infection is high in those ≥5 cm in size [5]. The accepted treatment of SMCs is surgery. Percutaneous interventional treatment options are not preferred because of high recurrence rates and complications. Surgical treatment options include splenectomy (partial or total), decapsulation and fenestration. However, due to the risk of immunosuppression and thrombocytosis after total splenectomy, the current trend is reported to be spleen-sparing techniques [3]. In this case report, laparoscopic total splenectomy was performed because the cyst was located intraparenchymally and in the hilar region.

CONCLUSION

SMC is a rare primary splenic cyst and is usually asymptomatic. It is often detected incidentally by imaging modalities. Symptomatic cysts with a size of more than 5 cm should be treated. Spleen sparing techniques are accepted as the current treatment option. In this case report, a young adult patient who underwent laparoscopic splenectomy for symptomatic SMC is discussed in the light of the literature.

Author contributions:
Ugur Kesici: Study design, analysis, and interpretation, writing the article, critical revision of the article, and literature review.
Mustafa Ayvazoglu: Data collections, literature review.
Yigitcan Celik: Data collections, literature review, English editing.
Orhan Yalcin: Analysis, critical revision of the article, and literature review.

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