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Laparoscopic treatment of splenic lymphangioma: A rare case in adults

Mutlu Ünver, Şafak Özturk, Varlık Erol, Eyüp Kebabcı, Kamil Pehlivanoğlu, Nihat Zalluhoğlu, Mustafa Ölmez

T.C.S.B. Tepecik Teaching and Research Hospital, Department of General Surgery, Izmir, Turkey

Email address:
mutluunver@gmail.com (M. Ünver)

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Abstract: Primary benign tumors of the spleen are extremely rare and account for less than 0.007% of all tumors identified upon surgery and autopsy. The differential diagnosis is extensive and includes lymphoma, infarction, septic embolism, metastases (melanoma, breast, ovarian and lung cancer), and splenic cysts.Splenic lymphangiomas are usually benign tumors that predominantly affect children, whereas only a few cases have been reported in adults. Splenic lymphangiomas are mostly asymptomatic; therefore, the final diagnosis should be based on a combination of clinical, radiological, and histopathological findings. Their prognosis is good but there is a remarkable high risk of splenic rupture. Aspiration, drainage and sclerosis are some of the conservative managements that are accompanied with a high risk of recurrence.Surgery is always the preferable definitive treatment. We report a case of splenic lymphangioma, and discuss both diagnostic and therapeutic aspect of laparoscopic splenectomy which is the more effective procedure in these kind of cases.

Keywords: Splenic Lymphangioma, Laparoscopy, Cystic Mass

1. Introduction

Primary benign tumors of the spleen are extremely rare and account for less than 0.007% of all tumors identified upon surgery and autopsy(1). Lymphangiomas are generally considered to be congenital malformations of the lymphatic system, and they occur mostly in the neck, mediastinum and retroperitoneum; they are seldom found in the spleen(2,3). Splenic lymphangiomas are usually benign tumors that predominantly affect children, whereas only a few cases have been reported in adults(3-5). Splenic lymphangiomas are mostly asymptomatic; therefore, the final diagnosis should be based on a combination of clinical, radiological, and histopathological findings(3). Splenic lymphangiomas have a wide spectrum of clinical and laboratory findings, from an incidental finding to a large symptomatic mass. Their prognosis is good but there is a remarkable high risk of splenic rupture(6). Surgery is always the preferable definitive treatment(7).

We report a case of splenic lymphangioma, and discuss both diagnostic and therapeutic aspect of laparoscopic splenectomy which is the more effective procedure in these kind of cases.

2. Case Report

A 53 years old female patient presented with recurrent left upper quadrent abdominal pain during the last 6 months. On admission, vital signs (blood pressure, heart rate, respiration rate, and body temperature) were within normal limits. The patient was in good general health and had no significant weight loss. On physical examination, the abdomen was soft. The routine blood tests were normal. There was no remarkable family history. Tumor markers were in normal limits.

For evaluation of the left upper quadrant pain, abdominal ultrasound was performed. It was reported as a focal, fairly well defined cystic mass(7.5x6 cm) seen in the spleen. The mass are predominantly anechoic with fine septations. For further evaluation of the splenic mass, an abdominal computed tomoghrapy with oral and intravenous contrast was performed. The abdominal CT showed an enlarged spleen with a 7.7x6.5 cm fluid density cystic mass with multiple septations(Fig. 1). The imaging findings favored a cystic mass originated from spleen. Indirect

hemagglutination test for hydatid cyst was negative. With clinical and radiological findings, we decided to perform laparoscopic splenectomy carry out for definitive diagnosis and relief of symptoms. Pneumococcal vaccine was given to the patient 2 weeks before the surgery. To prevent acute gastric dilatation after splenectomy, nasogastric tube was inserted prior to the splenectomy. Laparoscopic exploration demonstrated a splenic cyst located at the lower pole of the spleen. The operative time and the estimated blood loss were 45 minutes and 50 ml, respectively. Laparoscopic splenectomy with 3 trocars was performed. The. spleen was 13x10x8 cm measuring and weighing 380 gm with multiple large cysts was sent for histopathological evaluation(Fig.2). The patient recovered from the surgery with no complications. The patient was discharged on postoperative day 3. Surprisingly, the histopathologic examination after the operation revealed splenic lymhangioma. After a 6 months follow-up, she remains in good health.

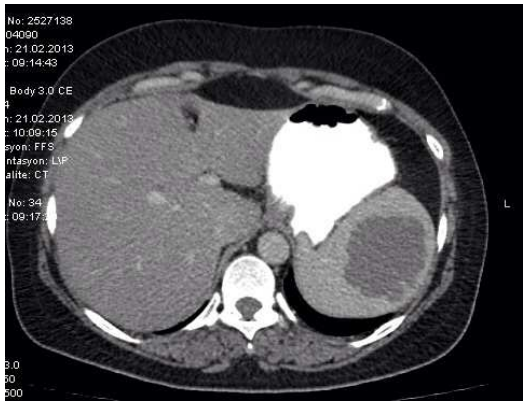

Figure 1. *CT scan of the abdomen. Splenic multiloculated cystic lesion.*

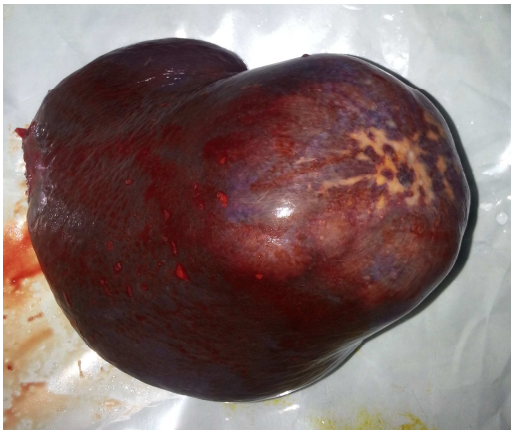

Figure 2. *Gross appearence of the spleen with cystic mass.*

3. Discussion

Lymphangiomas are generally considered to be congenital malformations of the lymphatic system, and they occur mostly in the neck, mediastinum and retroperitoneum; they are seldom found in the spleen(2,3) Splenic lymphangiomas are mostly asymptomatic; therefore, the final diagnosis should be based on a combination of clinical, radiological, and histopathological findings(3). Enlargement of lymphangioma due to internal bleeding, infections and pressure of the cyst on adjacent viscera could cause sympthomatic splenic lymphangiomas(7,8). The most common clinical manifestations of splenic lymphangioma are left upper quadrant pain, frequently accompanied by fever, nausea and vomiting(9).

The differential diagnosis is extensive and includes lymphoma, infarction, septic embolism, metastases (melanoma, breast, ovarian and lung cancer), and splenic cysts(10). Parasitic infection with Echinococcus granulosus is the main cause of cystic proliferations of the spleen(11). The differential factors are the patients' history, calcification in the cystic walls, a cyst with daughter cysts or concomitant cystic lesions in the liver or other organs(3,11). Splenic lymphangiomas present with thin-walled cystic masses without enhancement or with only slight enhancement of the thin septa in the CT imagings(3). In these kind of cases, abdominal ultrasound(US) usually shows hypoechoic spaces that contain internal echoes

Aspiration, drainage and sclerosis are some of the conservative managements that are accompanied with a high risk of recurrence. Whenever possible, the complete surgical resection should be performed(9). The prognosis of intraabdominal lymphangioma after resection is favorable. Recurrence is the main complication, which is demonstrated in 9.5% of patients, frequently after incomplete resection(8,12). In conclusion, laparascopic splenectomy could be safely performed in this rare pathology of the spleen.

Consent

All the authors should confirm that the patient has given their informed consent for the case report to be published.

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