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Sclerosing Hemangioma of the Spleen: A Case Report of a Large Cystic Splenic Mass Mimicking Hydatid Disease

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ABSTRACT: Sclerosing hemangioma of the spleen is a rare benign vascular tumor that may present as a large cystic mass and mimic other splenic lesions, particularly hydatid cysts or lymphangiomas. We report the case of a 64-year-old woman presenting with a painful left flank mass. Radiological findings suggested a multiloculated cystic splenic lesion suspicious for hydatid disease. The patient underwent splenectomy, and histopathological examination revealed a sclerosing hemangioma without evidence of malignancy. This case highlights the diagnostic challenges of cystic splenic lesions and underscores the role of surgical management in large symptomatic tumors.

INTRODUCTION

Diffuse hemangiomatosis is a rare vascular anomaly characterized by diffuse involvement of an entire organ or multiple organ systems with hemangioma-like lesions. Diffuse splenic hemangiomatosis (DSH), a specific form predominantly confined to the spleen, was first described by Langhans in 1879.[1] Etiology of splenic hemangioma is not exactly known. It has a female preponderance with age of presentation being around 55-65 years.[2]

This case emphasizes the importance of considering vascular tumors in the differential diagnosis of multiloculated cystic splenic masses and supports splenectomy as a safe and effective management strategy in selected patients.

CASE PRESENTATION

A 64-year-old woman presented with a three-month history of a progressively enlarging painful mass in the left flank. She reported no gastrointestinal symptoms, vomiting, digestive bleeding, or fever but described general deterioration of her overall condition.

Her medical history included:

- Type 2 diabetes mellitus for 8 years (well controlled; HbA1c 6.3%)
- Hypertension for 8 years
- Epilepsy (treatment discontinued)
- Psoriasis (treatment discontinued)
- Iron-deficiency anemia
- Previous maxillofacial surgery at CHU 20 Aout two years earlier

CLINICAL EXAMINATION

The patient was hemodynamically and respiratorily stable, fully conscious (GCS 15/15), with performance status 0.

Abdominal examination revealed:

- A sft abdomen
- A palpable, mobile, painful mass in the left flank measuring approximately 10 cm
- No signs of peritoneal irritation

Rectal and vaginal examinations were unremarkable.

LABORATORY FINDINGS

Initial laboratory tests revealed:

- Hemoglobin: 9.9 g/dL
- White blood cells: 4,330/mm³
- Platelets: 266,000/mm³

- C-reactive protein: 17.2 mg/L
- Normal renal function
- Negative hydatid serology
- Left ventricular ejection fraction: 56%

Imaging Findings

Thoracoabdominal CT scan demonstrated:

Thoracic Findings

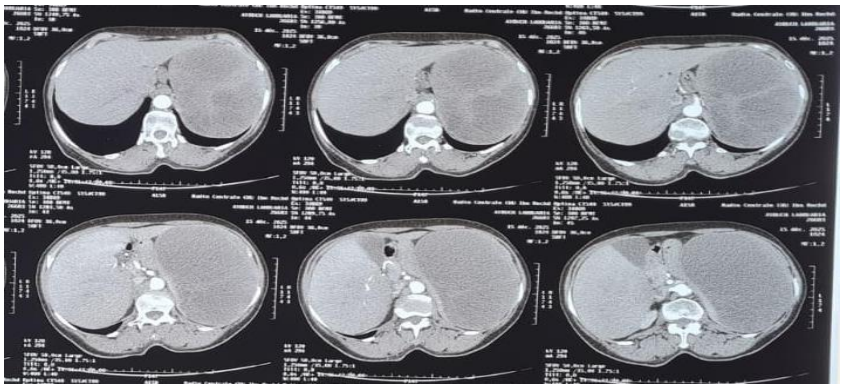
- Pericardial effusion measuring 15 mm adjacent to the right ventricle

Abdominal Findings

- A large multiloculated solid-cystic splenic mass measuring 162 × 96 mm, extending over 149 mm
- The lesion occupied nearly the entire spleen
- Imaging features were suggestive of type IV hydatid cyst, although cystic lymphangioma could not be excluded

Ultrasound confirmed multiloculated cystic components with avascular septations and a heterogeneous isoechoic solid portion without Doppler vascularization.

Pelvic imaging revealed a polymyomatous enlarged uterus with calcifications and a separate pre-uterine supravesical mass.



MULTIDISCIPLINARY DECISION AND SURGICAL MANAGEMENT

After multidisciplinary team discussion, surgical management was indicated.

The patient underwent open splenectomy via midline laparotomy.

Intraoperative Findings

- No ascites
- No peritoneal carcinomatosis
- No hepatic metastases
- Markedly enlarged spleen (30 cm) containing a 16 cm cystic lesion
- Enlarged calcified uterus

The patient required one unit of packed red blood cells intraoperatively.

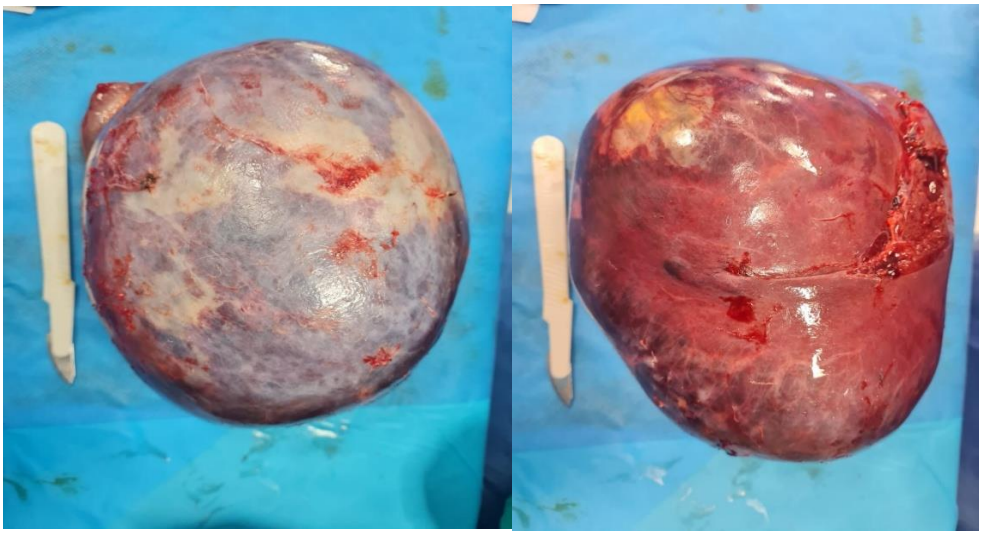


Figure 1 image of the splenectomy specimen

POSTOPERATIVE COURSE

The postoperative course was uneventful. The patient remained hemodynamically stable. Bowel function resumed on postoperative day 2 (flatus) and day 4 (stool). The abdominal drain was removed on day 4. She was discharged on postoperative day 5.
Postoperative laboratory values showed:

- Hemoglobin: 10.8 g/dL
- White blood cells: 7,810/mm³
- Platelets: 362,000/mm³

HISTOPATHOLOGICAL FINDINGS

Definitive pathological examination revealed a sclerosing hemangioma of the spleen with no evidence of malignancy.
A 64 year old woman presented with a three month history of a progressively enlarging and painful mass located in the left flank. She denied gastrointestinal symptoms, vomiting, digestive bleeding, or fever, but reported a general deterioration in her overall condition. Her medical history included type 2 diabetes mellitus for eight years, well controlled with a glycated hemoglobin level of 6.3 percent, hypertension evolving for eight years, epilepsy with discontinued treatment, psoriasis with discontinued treatment, iron deficiency anemia, and previous maxillofacial surgery performed at CHU 20 Aout two years earlier.
On admission, the patient was hemodynamically and respiratorily stable. She was fully conscious with a Glasgow Coma Scale score of 15 out of 15 and had a performance status of 0. Abdominal examination revealed a soft abdomen and a palpable, mobile, and painful mass in the left flank measuring approximately 10 centimeters. There were no signs of peritoneal irritation. Rectal and vaginal examinations were unremarkable.
Initial laboratory investigations showed a hemoglobin level of 9.9 grams per deciliter, a white blood cell count of 4,330 per cubic millimeter, and a platelet count of 266,000 per cubic millimeter. The C reactive protein level was 17.2 milligrams per liter. Renal function was within normal limits. Hydatid serology was negative. The left ventricular ejection fraction was 56 percent.
Thoracoabdominal computed tomography revealed a pericardial effusion measuring 15 millimeters adjacent to the right ventricle. Abdominal imaging demonstrated a large multiloculated solid and cystic splenic mass measuring 162 by 96 millimeters and extending over 149 millimeters, occupying nearly the entire splenic parenchyma. Radiological features were suggestive of a type IV hydatid cyst, although cystic lymphangioma could not be excluded. Ultrasonography confirmed multiloculated cystic components with avascular septations and a heterogeneous isoechoic solid component without Doppler vascularization. Pelvic imaging showed an enlarged polymyomatous uterus with calcifications, as well as a distinct pre uterine supravesical mass.
Following multidisciplinary team discussion, surgical management was indicated. The patient underwent open splenectomy through a midline laparotomy. Intraoperative exploration revealed no ascites, no evidence of peritoneal carcinomatosis, and no hepatic metastases. The spleen was markedly enlarged, measuring 30 centimeters, and contained a 16 centimeter cystic lesion. The uterus was enlarged and calcified. One unit of packed red blood cells was transfused intraoperatively.
The postoperative course was uneventful. The patient remained hemodynamically stable. Bowel function resumed on postoperative day 2 with passage of flatus and on postoperative day 4 with bowel movements. The abdominal drain was removed on day 4, and the patient was discharged on postoperative day 5. Postoperative laboratory tests showed a hemoglobin level of 10.8 grams per deciliter, a white blood cell count of 7,810 per cubic millimeter, and a platelet count of 362,000 per cubic millimeter. Definitive histopathological examination established the diagnosis of sclerosing hemangioma of the spleen, with no evidence of malignancy.

DISCUSSION

While splenic hemangioma is the most common benign tumor of the spleen, it is nevertheless a rare medical condition. Less than 100 cases of splenic hemangioma have been reported, with fewer 20 being pediatric cases[3]
These benign lesions of spleen are usually asymptomatic and detected incidentally; however, thrombocytopenia, anemia and coagulopathy could coexistence with large lesions[5] The mechanism underlying the development of SANT remains uncertain; it has been proposed that SANT represents as a peculiar polyclonal, nonneoplastic, vascular condition of the spleen, characterized by distinct pathological features[10]
Diagnosis is most often performed by clinical features and several imaging tests are cited in the literature[4] Splenic hemangioma appears as single or multiple lesions on CT scans, and is usually homogeneous, hypodense, or polycystic. It may contain calcifications and usually exhibits peripheral enhancement after intravenous contrast. Ultrasonography usually shows a round echogenic mass with or without cystic areas [7] Prior to the advent of objective imaging tests, such as CT, ultrasonography, and, most recently, magnetic resonance imaging, SHs were rarely diagnosed (or suspected) preoperatively.[9]
The discovery of the spleen's essential immunologic functions considerably changed the surgical strategy in splenic surgery; total splenectomy leaved room for the development of spleen sparing techniques and promote splenic-preserving surgery, To prevent overwhelming postsplenectomy sepsis and severe infections[6] Large hemangiomas have a higher risk of spontaneous rupture and life-threatening hemorrhage. Therefore, hemangiomas > 4 cm are recommended to be treated[8]

Partial splenectomy is a therapeutic option that is gaining more and more place in the approach of focal splenic tumors or benign primary lesions such as cysts and hamartomas and hematological disease such as hereditary spherocytosis[6]

CONCLUSION

Sclerosing hemangioma of the spleen is a rare benign vascular tumor that may mimic hydatid disease or cystic lymphangioma on imaging. Large symptomatic lesions require surgical resection for both therapeutic and diagnostic purposes. Histopathological examination remains the gold standard for definitive diagnosis.

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