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Case Report

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Splenic hamartoma: a case report

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ABSTRACT

Splenic hamartomas are benign vascular tumors initially described by Rokitansky in 1861. They are mostly asymptomatic and encountered incidentally. Large hamartomas may be palpable and can result in splenomegaly or rupture. A 55-year-old female presents to our medical facility for routine screening. Medical history reveals no prior operation or morbidity. Routine abdominal ultrasound revealed a 6x5 cm hypoechoic splenic mass containing cystic changes. A computed tomography was performed to establish a differential diagnosis, which revealed a mass in the anterior part of the spleen with a similar density to normal parenchyma and containing patchy hypodense areas. Based on these findings, an ultrasound guided tru-cut biopsy was performed to confirm the diagnosis. Histopathological evaluation confirmed the diagnosis of splenic hamartoma. In conclusion, splenic hamartomas should be considered in the differential diagnosis of well-circumscribed, hypervascular, solid and hypoechoic or isodense lesions when encountered on abdominal ultrasonography or computed tomography.

Keywords: Ultrasonography, computed tomography, hamartoma, spleen

INTRODUCTION

Splenic hamartomas are benign vascular tumors initially described by Rokitansky in 1861. They are mostly asymptomatic and encountered incidentally. Large hamartomas may be palpable and can result in splenomegaly or rupture. Splenic hamartomas are histopathologically composed of disorganized red pulp cells. In this case, we present the findings of a splenic mass that was incidentally identified on ultrasound imaging.

CASE

A 55-year-old female presents to our medical facility for routine screening. Medical history reveals no prior operation or morbidity. Routine abdominal ultrasound revealed a 6x5 cm hypoechoic splenic mass containing cystic changes (Figure 1). A computed tomography was performed to establish a differential diagnosis, which revealed a mass in the anterior part of the spleen with a similar density to normal parenchyma and containing patchy hypodense areas (Figure 2, 3). Based on these findings, an ultrasound guided tru-cut biopsy was performed to confirm the diagnosis (Figure 4). Histopathological evaluation confirmed the diagnosis of splenic hamartoma.

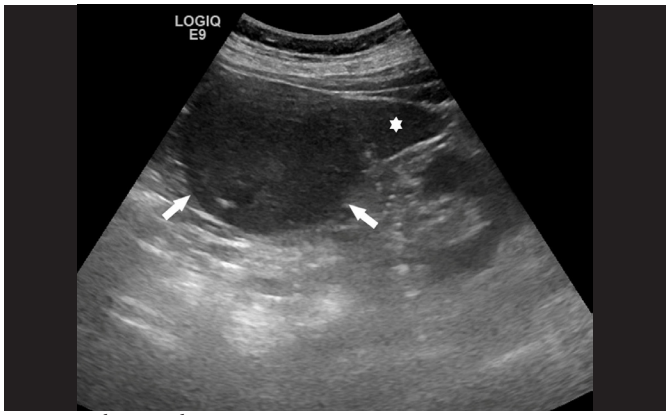

Figure 1. Ultrasound

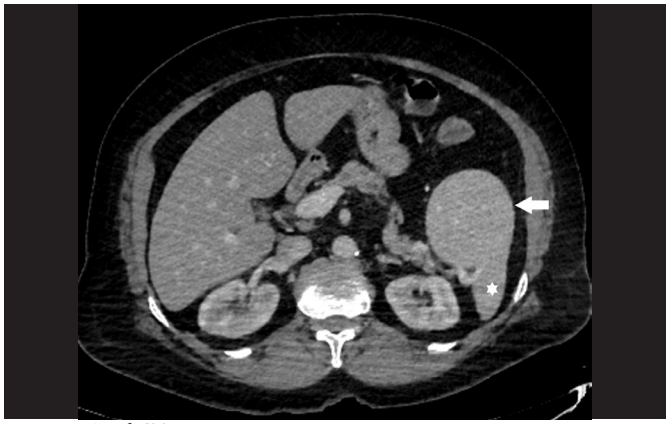

Figure 2. Axial CT

CT: Computed tomography

DISCUSSION

Splenic hamartomas are rare vascular lesions that are generally discovered incidentally during imaging.[1] They are typically seen in older patients with a similar male-female incidence.[2] In clinical series involving splenectomy, they are observed at a rate of 3/200,000. These lesions are frequently round, well-circumscribed, non-encapsulated and multiple or solitary.

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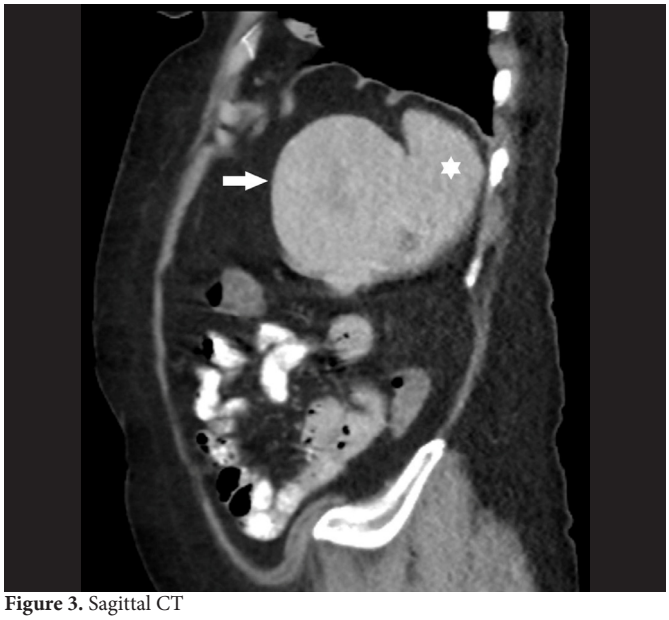

Figure 3. Sagittal CT

CT: Computed tomography

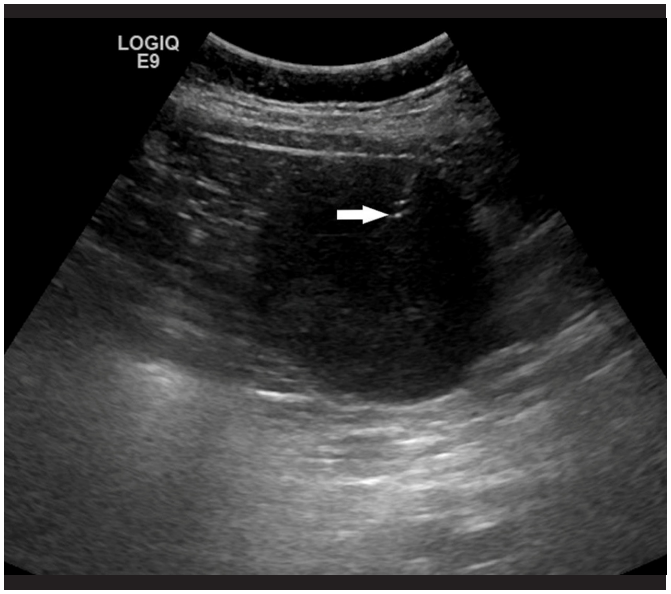

Figure 4. Bx with ultrasound

While similar in nature to spleen parenchyma, hamartomas are composed of abnormally organized splenic components such as white and red pulp. Although they are typically solitary, patients with tuberous sclerosis or Wiskott-Aldrich syndrome may present with multiple lesions. Symptoms arise due to the mass effect caused progression of lesion size.[3]

Splenic hamartomas are usually observed as hypoechoic solid masses on ultrasonography; however, they may exhibit heterogeneity due to cystic and hemorrhagic changes.[4] Doppler sonography and post-contrast examinations reveal these masses to be hypervascular. In this case, abdominal ultrasonography revealed a hypoechoic, well-circumscribed and solid hypervascular lesion in the anterior part of the spleen consistent with a hamartoma.

On CT examination, hamartomas appear as isodense or hypodense solid lesions that exhibit heterogeneous contrast enhancement when compared with the adjacent splenic parenchyma.[5] Similarly, the present case revealed a well-circumscribed isodense lesion consistent with a splenic hamartoma on CT evaluation.

Differential diagnosis usually remains wide even after imaging characterization, and splenectomy remains a crucial step for differentiation from other entities. The later includes vascular and non-vascular solid lesions of the spleen.[6] It may be difficult to differentiate a splenic hamartoma from littoral cell angioma, hemangioma, hemangioendothelioma, lymphangioma, sclerosing angiomatoid nodular transformation, and angiosarcoma. Radiologically, a similar picture may be seen with lymphoma, metastatic neoplasms, inflammatory myofibroblastic tumor, and disseminated granulomatous diseases.[5-8]

Although splenic hamartoma may be suggested by images, tissue is required for definitive diagnosis and is usually obtained via splenectomy or partial splenectomy, which can also relieve symptoms and exclude malignancies.[5,9,10] When associated with hematologic disorders, splenectomy can sometimes result in cure.[6] Extraction of the intact spleen has important diagnostic and therapeutic rules. A fragmented spleen may add difficulty to the diagnosis and result in peritoneal dissemination in case a malignancy is diagnosed. In addition, hemato-logic disturbances may continue to occur if a splenic fragment is retained within the peritoneal cavity.[7]

It is of paramount importance to mention that fine-needle aspiration, although it can provide evidence for diagnosis, carries the risk of hemorrhage and peritoneal seeding. Hence, surgery becomes mandatory.[11] In children, given the important immune function of the spleen, every effort should be made to save normal splenic tissue with partial splenectomy for single small lesions. Otherwise, total splenectomy may be preferred for multiple, large, or centrally-located lesions or when malignancy cannot be excluded.[7,9,10]

CONCLUSION

As a result, splenic hamartomas should be considered in the differential diagnosis of well-circumscribed, hypervascular, solid and hypoechoic or isodense lesions when encountered on abdominal ultrasonography or computed tomography. Although splenic hamartoma may be suggested by images, tissue is required for definitive diagnosis and is usually obtained via splenectomy or partial splenectomy, which can also relieve symptoms and exclude malignancies.

ETHICAL DECLARATIONS

Informed Consent

The patient signed and free and informed consent form.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

The authors declared that this study has received no financial support.

Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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