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Splenic hamartoma associated with thrombocytopenia: A case report

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ABSTRACT

INTRODUCTION: Hamartomas are rare, benign tumors of the spleen. Few cases of splenic hamartomas associated with thrombocytopenia have been reported.
PRESENTATION OF CASE: An asymptomatic 64-year-old man with myelodysplastic syndrome was found to have a splenic tumor. Laboratory tests were significant for thrombocytopenia, with a platelet count of $7.8 \times 10^4/\mu L$. Ultrasonography showed splenomegaly (10.8×6.6 cm), and a hypoechoic splenic mass (8.0×7.0 cm). Color doppler ultrasound revealed blood flow within the mass, and the mass density was homogeneous on abdominal computed tomography (CT). Contrast-enhanced CT showed heterogeneous enhancement of the splenic mass during the arterial phase. Positron emission tomography (PET)-CT showed no significant fludeoxyglucose (FDG) accumulation within the mass. The differential diagnosis included splenic hamartoma, splenic hemangioma, splenomegaly associated with extramedullary hematopoiesis, and malignant tumor, including solitary splenic metastasis. A laparoscopic splenectomy was performed due to the possibility of malignancy, the presence of thrombocytopenia, and the risk of splenic rupture. The resected specimen showed a localized, well-demarcated, 8.0×7.0 cm splenic mass. Histological examination revealed abnormal red pulp proliferation and the absence of normal splenic structures. The patient's post-operative course was uneventful. His platelet count improved on post-operative day 1 and he was discharged on post-operative day 9. He remained in good health with a normal platelet count one month after surgery.
DISCUSSION: Making definitive preoperative diagnosis is difficult in splenic hamartomas. Surgery is necessary for diagnosis when malignancy cannot be ruled out.
CONCLUSIONS: Surgery may also improve symptoms of hypersplenism, including thrombocytopenia.

1. Introduction

The present work has been reported in line with the SCAREcriteria [1].

Hamartomas are rare, benign tumors of the spleen. Most patients are asymptomatic and splenic hamartomas are usually identified incidentally on imaging. However, a minority of patients have symptoms of hypersplenism, including thrombocytopenia, anemia, and pancytopenia. Few cases of splenic hamartomas associated with thrombocytopenia have been reported. We report herein a case of splenic hamartoma associated with thrombocytopenia.

2. Presentation of case

An asymptomatic 64-year-old man with myelodysplastic syndrome and hypertension was referred to our department for evaluation and treatment of a newly identified splenic tumor that was discovered by the ultrasonography accidentally. Laboratory tests showed the following: hemoglobin 15.0 g/dl; white blood cell count $5.54 \times 10^3/\mu L$; platelets $7.8 \times 10^4/\mu L$; serum total protein 7.0 g/dL; serum albumin 4.3 g/dL; total bilirubin 0.9 mg/dL; aspartate aminotransferase 38 IU/L; alanine aminotransferase 79 IU/L; alkaline phosphatase 291 IU/L; and serum glutamyltransferase 441 IU/l. Soluble interleukin-2 receptor was within normal limits (352 U/ml).

Ultrasonography revealed splenomegaly (10.8×6.6 cm), and a solid, hypoechoic mass (8.0×7.0 cm) in the spleen (Fig. 1a, b). Color doppler ultrasound demonstrated blood flow within the mass (Fig. 1c). Abdominal computed tomography (CT) showed an isodense splenic mass (Fig. 2a). Contrast- enhanced CT showed het-

Abbreviations: CT, computed tomography.

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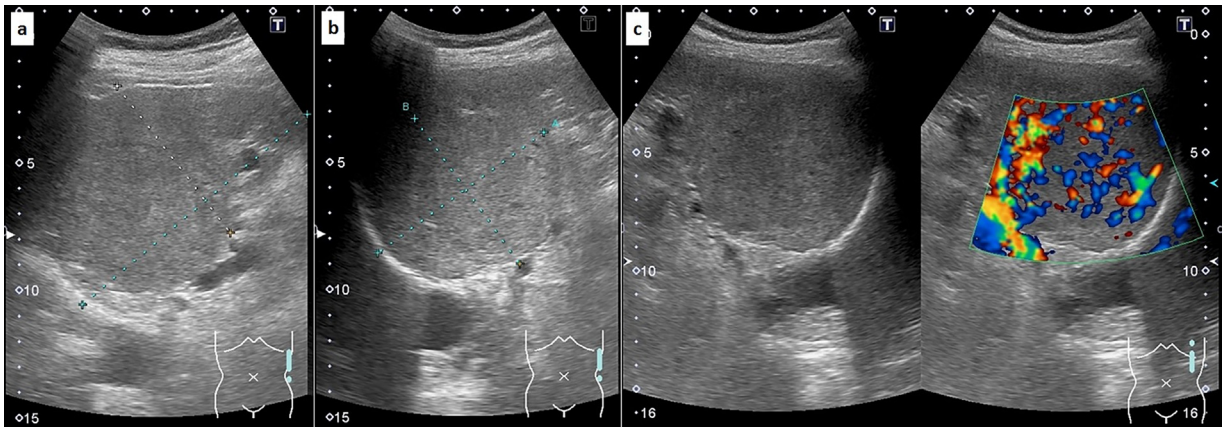

Fig. 1. Ultrasonography showed splenomegaly (10.8 × 6.6 cm), with a solid, hypoechoic splenic mass (8.0 × 7.0 cm) (Fig. 1a, b). Color doppler ultrasound showed blood flow within the mass (Fig. 1c).

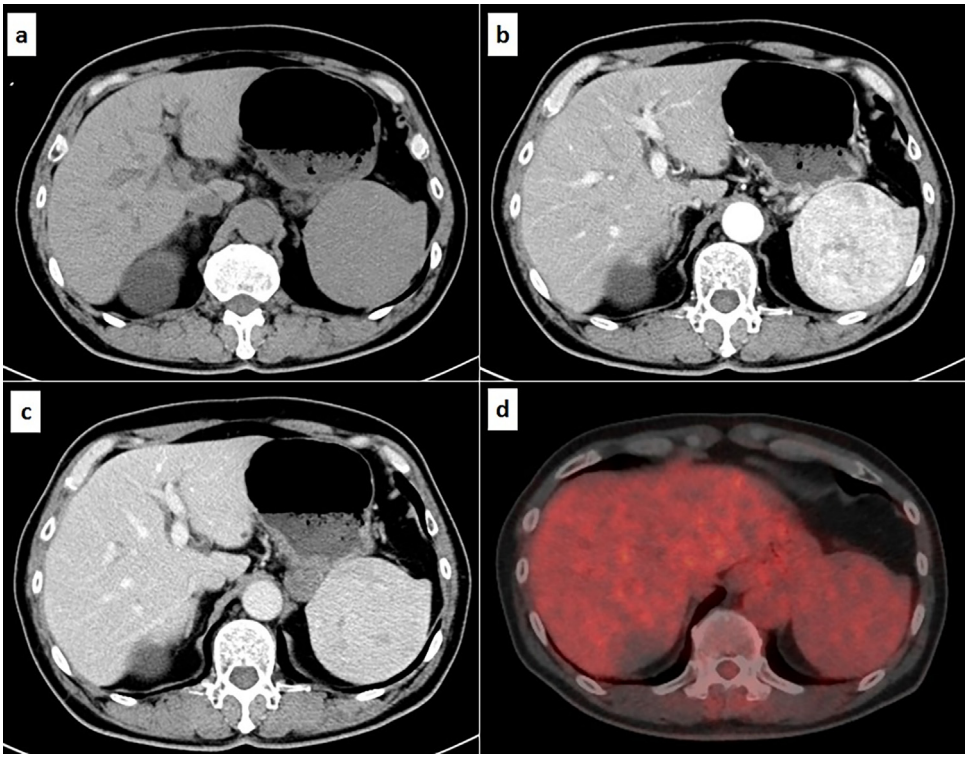

Fig. 2. Abdominal computed tomography (CT) revealed an isodense splenic mass (a). Contrast- enhanced CT showed heterogeneous enhancement of a solid splenic mass (8.0 cm) during the arterial phase (b). The mass was isodense compared to normal splenic parenchyma in the portal phase (c). PET-CT showed no significant FDG accumulation within the mass (d).

erogeneous enhancement of the mass in the arterial phase (Fig. 2b). The mass was isodense compared to normal splenic parenchyma in the portal phase (Fig. 2c). Positron emission tomography (PET)-CT showed no significant fludeoxyglucose (FDG) accumulation within the mass (Fig. 2d). The differential diagnosis included splenic hamartoma, splenic hemangioma, splenomegaly due to extramedullary hematopoiesis in the context of myelodysplastic syndrome, and malignant tumor, including solitary splenic metastasis. A laparoscopic splenectomy was performed given the possibility of a malignant tumor, the presence of thrombocytopenia, and the risk of splenic rupture.

The resected specimen showed a localized, well-demarcated, 8.0 × 7.0 cm splenic mass (Fig. 3a,b). Histological examination revealed abnormal red pulp proliferation and the absence of normal splenic structures. No extramedullary hematopoiesis was observed (Fig. 3c,d).

The patient's postoperative course was unremarkable and he developed no complications. His platelet count improved on post-operative day 1, and he was discharged on post-operative day 9. He remained in good heath with a normal platelet count one month after surgery.

3. Discussion

Splenic hamartomas were first reported by Rokitansky in 1861 [2]. They are non-capsulated, single or multiple nodules in the spleen and consist of grossly disproportionate native splenic elements. Splenic hamartomas are rare, benign tumors with a reported incidence of 3 per 200,000 splenectomies in a single center series