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Ilija Golubovic *

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Case Report

Splenic Hemangioma as a Rare Tumor: A Case Report.

Ilija Golubović [1], Milan Radojkovic [1], Aleksandar Vukadinovic [1], Marko Stojanovic [2]

[1] Clinic for Digestive Surgery, University Clinical Center NIS, 18000 NIS, Serbia.

[2] Clinic for Gastroenterology and Hepatology, University Clinical Center NIS, 18000 Nis, Serbia.

***Corresponding Author:** Ilija Golubovic, Clinic for Digestive Surgery, University Clinical Center Nis, 18000 NIS, bul. Dr Zorana Djindjica 48, 18000 NIS, Republic of Serbia.

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Abstract:

Introduction: Splenic vascular lesions include developmental malformations, non-neoplastic lesions, and vascular tumors. Among these tumors, hemangioma is considered benign. Thus far, there have been fewer than 100 cases recorded in the medical literature.

Case report: We report herein a patient with splenic hemangioma who underwent splenectomy. Magnetic resonance imaging showed an enlarged spleen measuring 135 mm in craniocaudal length with a large mass lesion measuring 83 mm by 78 mm by 80 mm. The lesion appeared as a clearly demarcated, encapsulated, round, focal lesion that partially bulged the contour. The pathology report showed: *Haemangioma capilare lienis. Haemorrhagio recens subscapularis et stasis acuta venosa lienis*.

Conclusions: The diagnosis is usually made by incidental finding, and the clinical presentation varies. Due to the risk of rupture, splenectomy (whether partial or complete) is the preferred treatment method once this rare disorder is diagnosed.

Key words: hemangioma; vascular tumor; spleen; magnetic resonance imaging; surgery

Introduction

A hemangioma is a slow-growing tumor consisting of an excess of new blood vessels. Thus far, there have been fewer than 100 cases recorded in the medical literature. The clinical presentation varies, and most diagnoses are incidental [1]. Symptoms may include abdominal pain, dyspnea, diarrhea, and constipation. Hematological abnormalities are exclusively present in diffuse hemangiomatosis [2]. Splenomegaly occurs in 10% of cases. Complications such as spontaneous rupture with life-threatening bleeding occur in up to 25% of patients, particularly when tumor size exceeds 4 cm [1]. According to autopsy series, the incidence of splenic hemangioma ranges from 0.02% to 16% [1, 3].

Case Report:

We report herein a case of a patient with a splenic hemangioma who underwent splenectomy. The patient, a 70-year-old female, had experienced chronic pain in her left upper abdomen for two years, with acute exacerbations occurring every two to three months and lasting five days. The exacerbations responded to analgesics. Examination revealed tenderness in the left hypochondriac and lumbar regions, but the spleen was not palpable. Hematological findings were normal. The patient had a history of hypertension and type 2 diabetes.

An ultrasound of the abdomen revealed moderate splenomegaly, measuring 140 mm craniocaudally, with a large, predominantly hyperechoic mass at the upper pole. The mass measured approximately 85 mm by 80 mm by 75 mm. Magnetic resonance imaging (MRI) of the abdomen was performed using a 1.5 T MRI (Ingenia; Philips Healthcare, Best, the Netherlands) in the coronal, axial, and sagittal planes, following the standard protocol. T2-weighted sequences in multiplanar reconstruction were used for evaluation. Respiratory-triggered T2 SPAIR axial and T2 coronal sequences with a slice thickness of 5 mm that comprise the entire abdomen were acquired. The MRI showed that the spleen was enlarged to 135 mm in length, with a large exophytic mass growing along the anterosuperior border. The mass measured 83 mm by 78 mm by 80 mm and appeared as a clearly demarcated, encapsulated, round, focal lesion that partially bulges the contour. On the native sequence set, the T1 (mDIXON) isosignal is moderately hypersignal with moderate diffusion restrictions, showing early visible post-contrast dynamics that are predominantly homogeneous already in the arterial

phase, with uniform signal amplification in the venous phase and several smaller hyposignal zones within the lesion **(Figure 1)**. According to the radiologist, this finding is highly likely to be benign, primarily of hamartomatous nature

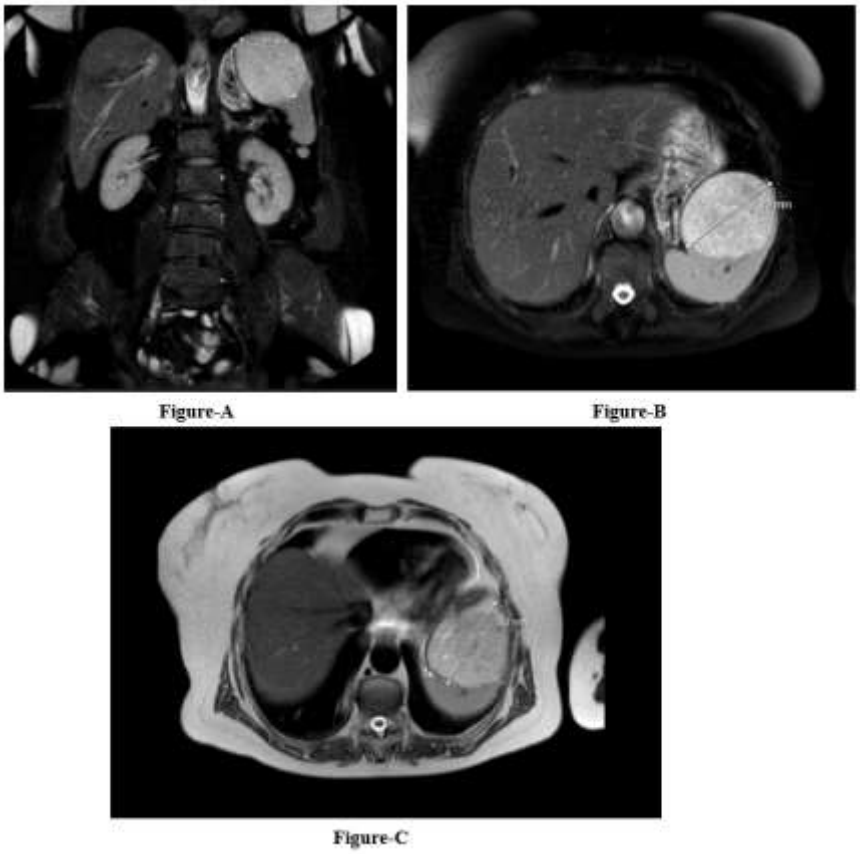

Figure 1: The T2w-SPAIR sequence in the coronal (**A**) and axial (**B**) planes, as well as the T2w-TSE sequence in the axial (**C**) plane, show a splenic vascular tumor.

After a detailed preoperative evaluation, a splenectomy was recommended due to a vascular tumor of the spleen. There was no blood loss or injury to the tail of the pancreas during the procedure. The tumorous spleen specimen was completely removed **(Figure 2).**

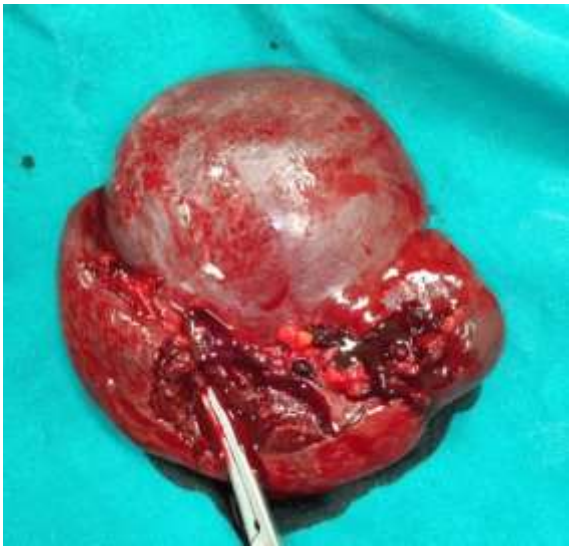

Figure 2: Intraoperative image of the spleen specimen with tumor.

The drain was removed on the sixth postoperative day, and the patient was discharged. During his two- and four-week postoperative assessments in the outpatient clinic, there were no concerns about pancreatic ductal leaks, fistulas, or other problems. The pathology report showed: *Haemangioma capilare lienis. Haemorrhagio recens subscapularis et stasis acuta venosa lienis.*

Discussion

Splenic vascular lesions include developmental malformations and non-neoplastic lesions (Hamartoma, Sclerosing Angiomatoid Nodular Transformation - SANT) as well as vascular tumors (benign: Hemangioma – localized/diffuse, Lymphangioma, Littoral-cell angioma; malignant: Angiosarcoma, Littoral-cell angiosarcoma; imtermediate malignancy: The so-called hemangioendothelioma, Hemangiopericytoma) [4]. The most common benign neoplasms of the spleen are hemangiomas [5]. Macroscopically, they are delineated and non-encapsulated with a honeycomb appearance and red color; however, they often blend in with the surrounding pulp. They are often solitary, but a thorough examination often reveals multifocal lesions. The majority of hemangiomas are cavernous, with mixed and capillary forms being less common [6, 7].

Due to their rare occurrence and variable appearance, it can be challenging to differentiate between benign vascular lesions of the spleen. While some researchers classify hamartomas as a type of hemangioma, hamartomas invariably include splenic sinus structures and other red pulp components. Hemangiomas commonly have well-organized lymphoid tissue in their architecture, a characteristic that hamartomas often lack. Intensified fibrosis is possible in hamartomas but is more indicative of a hemangioma [4]. Treatment options include splenectomy, embolization of the splenic arterial branch supplying the hemangioma, radiotherapy, and anti-angiogenic therapy. Of all splenectomy indications, 96% are related to hematological diseases. Splenic hemangiomas account for less than 1% of all non-hematological indications [1]. A large hemangioma carries a risk of rupturing and causing significant bleeding. Splenectomy, whether performed by laparotomy or laparoscopy, yields the best outcomes [1, 8]. Some medical centers offer partial splenectomy when the lesion is small and localized to the poles of the spleen [9].

Conclusion

In conclusion, we presented a case of a patient with a splenic hemangioma who underwent splenectomy. This diagnosis is usually made incidentally, and the clinical presentation varies. Due to the risk of rupture, splenectomy—whether partial or complete—is the preferred treatment method once this rare disorder is diagnosed. Depending on the patient's age and the site and size of the lesion, splenic artery embolization and anti-angiogenic treatment may also be performed.

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Footnotes

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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