

## Case Report

# SANT, an Incidentaloma: Case Report and Literature Review

## SANT, um Incidentaloma: Caso Clínico e Revisão da Literatura

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<https://doi.org/10.34635/rpc.1050>

### ABSTRACT

This case report tells the story of a 65-year-old asymptomatic woman in whom an incidentaloma of the medial portion of the spleen was identified during a urinary imaging examination. After a targeted study, the most likely diagnostic hypothesis was a sclerosing angiomatous nodular transformation of the spleen (SANT). This was confirmed by histological examination, after the patient had undergone a laparoscopic splenectomy.

In this article we also briefly review the existing literature on this topic.

**Keywords:** Spleen; Splenectomy; Splenic Diseases/surgery

### RESUMO

Este caso clínico relata a história de uma mulher de 65 anos, assintomática, na qual foi identificado um incidentaloma da porção medial do baço durante um exame imagiológico urinário. Após estudo dirigido, a hipótese diagnóstica mais provável foi a de uma transformação nodular angiomatosa esclerosante do baço (SANT). Esta hipótese foi confirmada por exame histológico, depois de o doente ter sido submetido a uma esplenectomia laparoscópica.

Neste artigo, fazemos também uma breve revisão da literatura existente sobre este tema.

**Palavras-chave:** Baço; Doenças do Baço/cirurgia; Esplenectomia

**Received/Recebido:** 14/072024 **Accepted/Aceite:** 08/05/2025 **Published online/Publicado online:** 05/06/2025 **Published/Publicado:**

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## INTRODUCTION

Sclerosing angiomatous nodular transformation of the spleen (SANT) is a rare, benign, proliferative vascular lesion. Patients are mostly middle-aged, asymptomatic women and the diagnosis is incidental.<sup>1-3</sup>

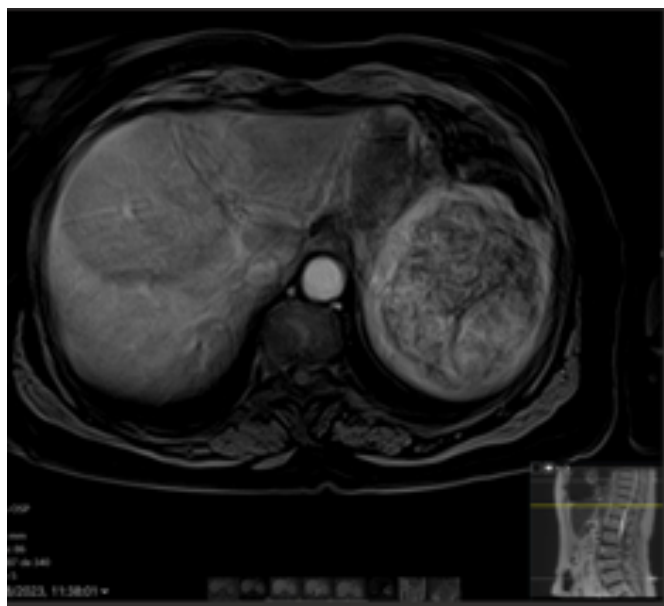
Analysis of a clinical case by consulting the hospital file.

## CASE REPORT

A 65-year-old woman with a history of repeated urinary tract infections (UTIs), taking alprazolam 1 mg and estriol 1 mg/g as her usual medication, underwent an ultrasound examination of her urinary tract.

The ultrasound detected a large mass in her spleen and she was therefore referred to a General Surgery consultation. She was asymptomatic and had no alterations on physical examination.

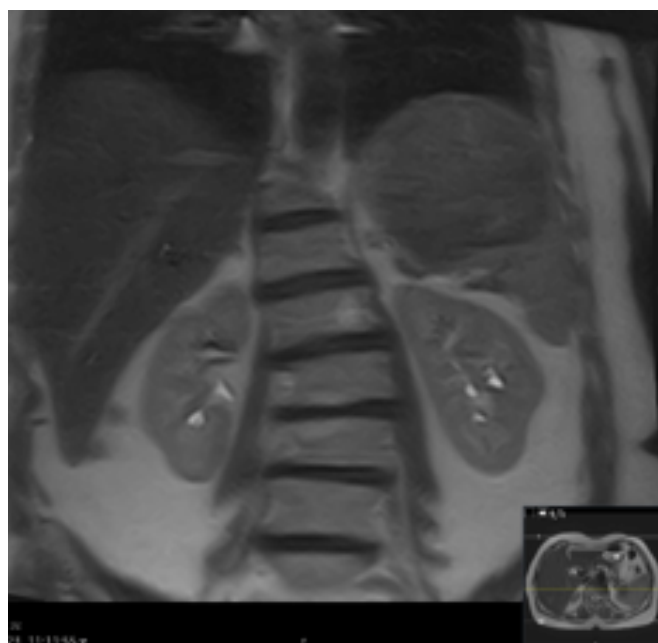
For better characterization, she underwent a magnetic resonance imaging (MRI) which showed: "An enlarged spleen with a globose morphology, measuring 14 cm along its longest axis, with a voluminous expansile lesion occupying the upper two-thirds, measuring 11x9 cm. It is a lesion with irregular contours, where some microcalcifications can be identified. After intravenous contrast injection, some heterogeneous enhancement was observed, with an angiomatoid conformation. It could be a giant hemangioma or, more likely, a sclerosing angiomatous transformation of the spleen. There are no other focal splenic lesions". The MRI images are shown in Figs. 1, 2 and 3.



**Figure 1.** Axial section of abdominal MRI.



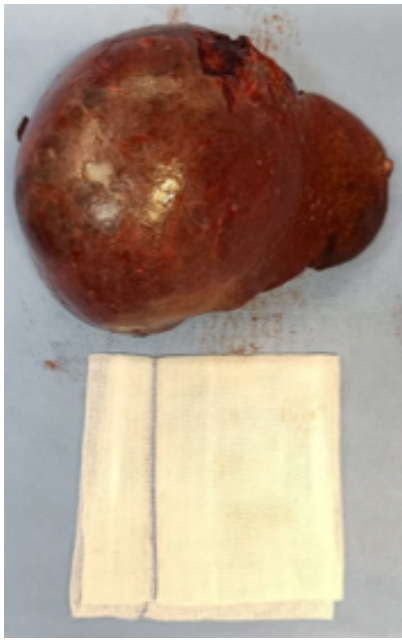
**Figure 2.** Sagittal section of abdominal MRI.



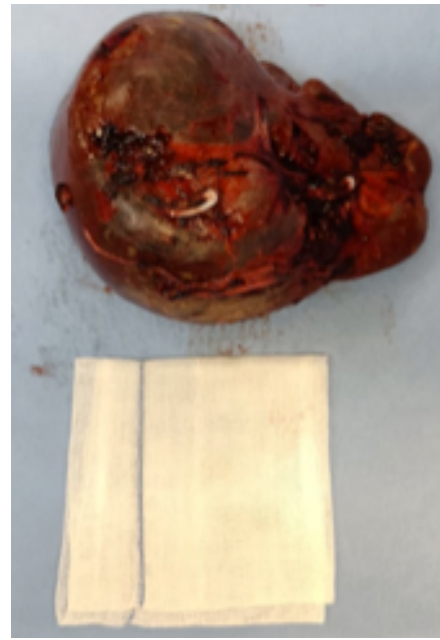
**Figure 3.** Abdominal MRI coronal section.

She underwent laparoscopic splenectomy with no complications.

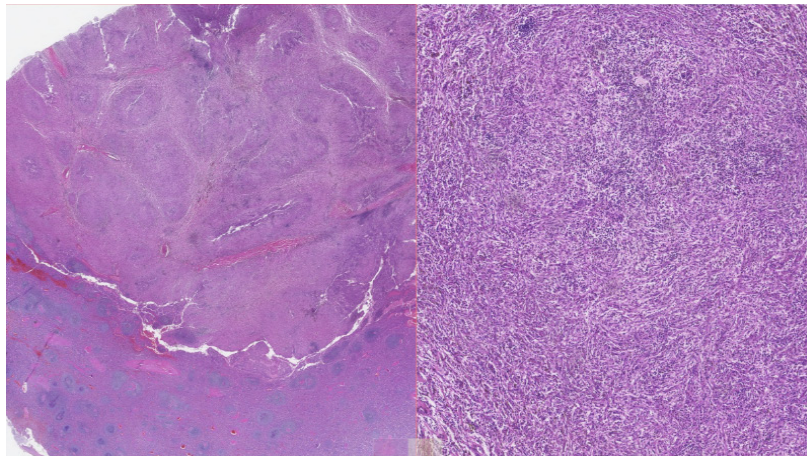
The histological assessment confirmed that it was a SANT (sclerosing angiomatous nodular transformation of the spleen), with a diameter of 9 cm. The following Figs. 4, 5, 6 and 7 show the surgical specimen and histology and immunohistochemistry results.



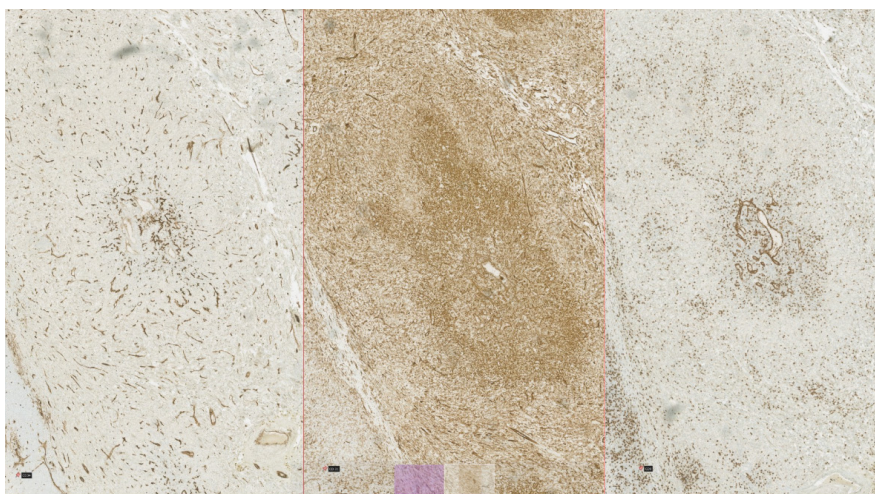
**Figure 4.** Anterior view of the surgical specimen.



**Figure 5.** Posterior view of the surgical specimen.



**Figure 6.** Histology of the surgical specimen.



**Figure 7.** Immunohistochemistry of the surgical specimen.

## DISCUSSION

SANT is a benign, proliferative vascular lesion, first described in 2004, characterized microscopically by multiple angiomatoid structures surrounded by fibrous tissue. It is rare, of unknown etiology and often confused and misdiagnosed as a hamartoma or hemangioendothelioma.<sup>1,2,4,5</sup>

The lesion is mostly described in the spleen, but there is one case of its presence in the adrenal gland. It is thought that they may arise from changes secondary to hemangiomas/lymphangiomas with splenic congestion and extensive hemorrhage, leading to fibrosis formation and tissue reorganization.<sup>6-9</sup>

The differential diagnosis also includes hemangiosarcomas, inflammatory pseudotumors, inflammatory myofibroblastomas, littoral cell angiomas and neoplasms.<sup>3,5</sup>

Unlike other benign lesions, SANT has no pathognomonic clinical or imaging characteristics, which makes diagnosis difficult. MRI is more accurate for these lesions.<sup>10,11</sup>

The patients are mostly middle-aged, asymptomatic women, and the diagnosis is incidental, as in the clinical case presented.<sup>10-12</sup>

In all patients, concomitant disease in other organs should be ruled out, as they are often associated with symptoms similar to von Hippel-Lindau syndrome (a hereditary syndrome that predisposes to malignant and benign neoplasms in various organs such as the central nervous system, kidney, adrenal gland, pancreas, among others).<sup>13-15</sup>

The treatment indicated, due to the hemorrhagic risk that a biopsy entails, the associated hemorrhagic risk in case of splenic trauma and the need to exclude malignancy, is resection of the spleen.<sup>1-3</sup> After this, there are usually no recurrences or metastases.<sup>3,4</sup>

The definitive diagnosis is made by histopathology and immunocytochemistry of the surgical specimen.<sup>13</sup>

## CONCLUSION

SANT is a rare, often asymptomatic lesion.<sup>1-3</sup> This makes its diagnosis challenging, since the medical community is not familiar with this pathology. Although benign, malignancy must be ruled out.<sup>6,7</sup> Added to the fact that it can carry a high risk of bleeding, splenectomy becomes the treatment of choice.<sup>8</sup>

The aim of this article was to demonstrate a clinical case of this pathology in order to help raise awareness of it.

## ETHICAL DISCLOSURES

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

**Financing Support:** This work has not received any contribution, grant or scholarship.

**Confidentiality of Data:** The authors declare that they have followed the protocols of their work center on the publication of patient data.

**Patient Consent:** Consent for publication was obtained.

**Provenance and Peer Review:** Not commissioned; externally peer-reviewed.

## RESPONSABILIDADES ÉTICAS

**Conflitos de Interesse:** Os autores declaram a inexistência de conflitos de interesse na realização do presente trabalho.

**Fontes de Financiamento:** Não existiram fontes externas de financiamento para a realização deste artigo.

**Confidencialidade dos Dados:** Os autores declaram ter seguido os protocolos da sua instituição acerca da publicação dos dados de doentes.

**Consentimento:** Consentimento do doente para publicação obtido.

**Proveniência e Revisão por Pares:** Não comissionado; revisão externa por pares.

## CONTRIBUTORSHIP STATEMENT

**RPD, BF, CMO and SG:** Data collection, writing and revising the article. All authors approved the final version to be published.

## DECLARAÇÃO DE CONTRIBUIÇÃO

**RPD, BF, CMO and SG:** Recolha de dados, redação e revisão do artigo. Todos os autores aprovaram a versão final a ser publicada.

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