



# A Rare Case of Multiple Splenic Artery Aneurysms in a Middle-Aged Woman

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## Abstract

Splenic Artery Aneurysm (SAA) is the most common visceral artery aneurysm, accounting for nearly 60% of splanchnic artery aneurysms, though its incidence remains rare at 0.78% in angiographic series. Multiple Splenic Artery Aneurysms (MSAAs) are extremely uncommon, with fewer than 20 cases reported. Despite their rarity, they carry significant risk of rupture, with mortality up to 25%. Risk factors include female sex, multiparity, and portal hypertension. We report a 36-year-old woman who presented with abdominal pain for one month. Examination revealed left hypochondrial tenderness and splenomegaly. Contrast-enhanced CT abdomen showed splenomegaly with three splenic artery aneurysms, chronic portal and splenic vein thrombosis, and multiple collaterals. The patient underwent open splenectomy with splenic artery ligation. Intraoperatively, three aneurysms were identified: a 4×3 cm aneurysm near the splenic hilum, and two large aneurysms (7×8 cm and 5×6 cm, bilobed) near the splenic artery origin, adherent to the pancreas. Multiple splenic collaterals and dilated short gastric vessels were noted. Histopathology revealed splenic congestion and aneurysmal changes with focal mural thrombosis. Postoperative recovery was uneventful. MSAAs, although rare, are clinically significant due to their catastrophic potential on rupture. Diagnosis is often incidental with imaging, but surgical management remains the mainstay in large or symptomatic cases, particularly when complicated by splenomegaly and venous thrombosis. This case underscores the importance of early recognition and timely surgical intervention in preventing life-threatening rupture.

## Introduction

Splenic Artery Aneurysms (SAA) are the most common splanchnic artery aneurysms, accounting for approximately 60%. Their incidence remains low, with reports ranging from 0.1% to 10% in autopsy studies. They occur more frequently in women, particularly in association with pregnancy and portal hypertension. Multiple Splenic Artery Aneurysms (MSAAs) are exceedingly rare, with fewer than 20 cases reported in the literature. Their clinical relevance stems from the risk of rupture,

which carries a high mortality rate. This case highlights the presentation, diagnosis, and management of a rare occurrence of MSAAs in a middle-aged woman.

## Case presentation

A 36-year-old woman presented with abdominal pain persisting for one month. She denied abdominal distension, vomiting, or altered bowel habits. No significant comorbidities were present. On examination, the abdomen was soft with tender-



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ness in the left hypochondrium. Splenomegaly was noted without a palpable mass. Contrast-enhanced CT (abdomen and pelvis) revealed splenomegaly with three splenic artery aneurysms and chronic thrombosis of the portal and splenic veins with multiple collaterals. The patient underwent open splenectomy with splenic artery ligation under general anesthesia on 27/06/2023. Intraoperatively, three aneurysms were identified: one 4×3 cm aneurysm near the splenic hilum, and two larger aneurysms measuring 7×8 cm and 5×6 cm (bilobed) near the splenic artery origin, adherent to the pancreas. Multiple collaterals and dilated short gastric vessels were observed. The liver was grossly normal. Histopathological examination confirmed chronic venous congestion of the spleen and aneurysmal changes in the splenic artery with focal mural thrombosis. Postoperative recovery was uneventful.

### Discussion

Although rare, SAAs are the most common visceral artery aneurysms and are significant for their potential to rupture, particularly in women and patients with portal hypertension. Multiple aneurysms are exceedingly uncommon, with very few cases reported. Diagnosis is often incidental on imaging, though symptomatic patients may present with abdominal pain. Management strategies depend on aneurysm size, symptoms, patient comorbidities, and associated conditions. Options include endovascular approaches or surgical intervention. In this case,

open splenectomy with splenic artery ligation was chosen due to the size and number of aneurysms, associated splenomegaly, and thrombosed portal vasculature. This approach ensured definitive management and prevented catastrophic rupture. The case reinforces that prompt surgical intervention remains the cornerstone in managing complex or multiple splenic artery aneurysms.

### Conclusion

MSAAs, though rare, should be considered in the differential diagnosis of patients presenting with splenomegaly and abdominal pain. Early detection and definitive surgical management are critical to prevent rupture-related mortality.

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