A Case Report of Splenic Artery Pseudoaneurysm with Fistulization to the Transverse Colon

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Introduction

We present a case of splenic artery pseudoaneurysms (SAP) with fistulization to transverse colon in a patient presenting with rectal bleeding, treated with embolization and subsequent splenectomy and splenic flexure colectomy.

Background

- SAPs are a rare entity estimated to occur in less than 1% of the population
- Most commonly secondary to pancreatitis, abdominal trauma, or postoperative/iatrogenic causes[1,2]
- Presenting symptom is predominantly abdominal pain, may also be hematochezia, melena or hematemesis[2]
- Untreated SAPs have up to a 37% risk of rupture and 90% risk of mortality, with most being diagnosed postmortem[3,4]

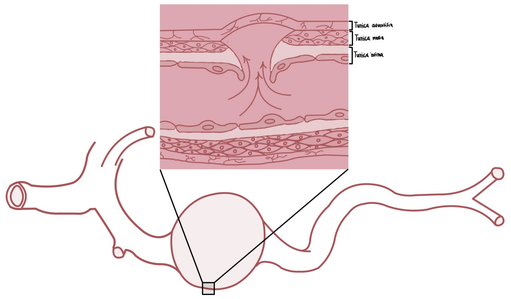

Fig. 1 — Schematic of splenic artery pseudoaneurysm.

Patient Presentation

An 89 year old female with history of hypertension and hyperlipidemia presented to the emergency department with complaints of hematochezia and abdominal pain. She reported bright red rectal bleeding, nausea, vomiting, and multiple syncopal episodes. No history of pancreatic disease or reported history of trauma. Contrasted abdominopelvic CT scan showed a SAP with fistulization of the SAP to the transverse colon, causing hematochezia, a known complication of SAPs. The cause of her SAP was unclear.

Fig. 2 — Axial arterial phase contrast-enhanced CT scan of the abdomen showing SAP (*arrow*) and contrast enhancement throughout the transverse colon suggestive of fistulization causing blood to enter the transverse colon.

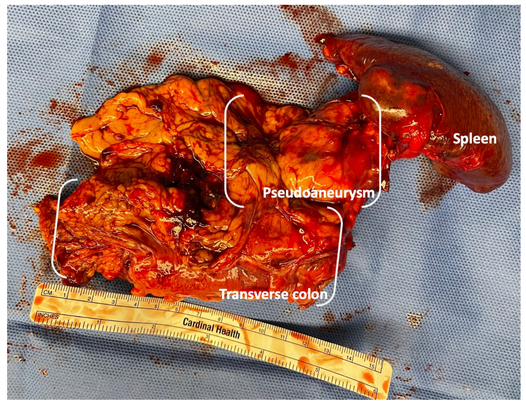

Fig. 3 — Image of the resected distal transverse colon, splenic flexure, and spleen revealing pseudoaneurysm.

Clinical Course

- Endovascular embolization was performed with successful resolution of bleeding
- Further evaluation with a colonoscopy that demonstrated retroperitoneal phlegmon fistulization of the colon and no further bleeding
- During the same hospitalization, a laparoscopic assisted splenectomy and splenic flexure colectomy was performed to resect the involved portion of colon *(Fig. 3)*; No complications occurred during the procedure
- Patient's postoperative course was complicated by urinary retention due to presumed UTI, left-sided pleural effusion, mitral regurgitation, and tricuspid regurgitation
- Once complications were resolved, the patient did well with resolution of symptoms
- In this case, timely diagnosis via abdominopelvic CT (*Fig. 2*) was imperative in guiding successful treatment

Discussion

- SAPs are very rare; Mayo Clinic reported 10 splenic artery pseudoaneurysms recorded over 18 years, and fewer than 200 cases are reported in the English-language literature[2]
- As the typical presenting symptoms of SAP are shared with multiple other pathologies, a high level of suspicion should prompt further evaluation to prevent adverse outcomes
- Tools most used for diagnosing SAPs are abdominal US, abdominal and pelvic CT, MRI, and MRA
  - Gold standard for diagnosis is digital subtraction angiography
  - Recommended initial diagnostic tool is computed tomography angiography (*Fig. 2*)
- Fistulization of the SAP to the colon, as seen in this patient, could lead to massive hemorrhage leading to hemorrhagic shock and possible death if left untreated
  - Fistulization to other structures, such as the stomach, pancreatic duct, or duodenum have also been described

Conclusion

In this case, timely diagnosis via abdominopelvic CT was imperative in preventing rupture and providing treatment in a timely manner. Endovascular embolization of the SAP with subsequent segmental resection of the involved colon proved to be a successful treatment of this patient's SAP. Given that SAP is a rare but potentially life-threatening condition, early diagnosis is crucial for the management of these patients.

References

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