



Delayed Gastrointestinal Hemorrhage From Visceral Artery Pseudoaneurysm in Necrotizing Pancreatitis After LAMS Removal

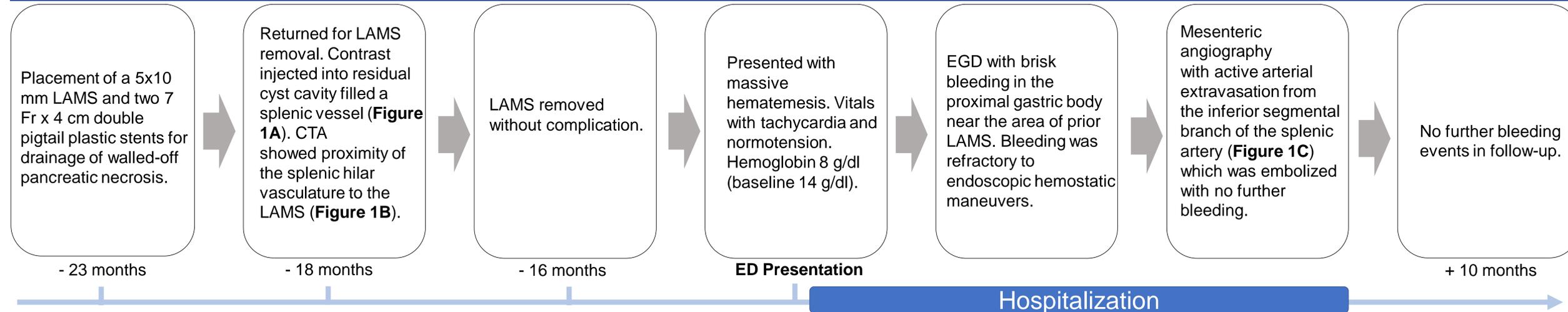
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Background

- Delayed bleeding from visceral artery pseudoaneurysm (PA) formation is an uncommon complication of lumen-apposing metal stent (LAMS) placement.
- Risk factors for gastrointestinal bleeding (GIB) in patients with LAMS is largely undefined but most bleeding occurs within 1 month of placement (**Table 1**).
- We report a case of delayed GIB due to rupture of a splenic artery PA after LAMS removal in a 34-year-old female.

Case Presentation



First Author	Year	Timing of Presentation after LAMS Placement	Did Bleeding Occur after LAMS was Removed? (yes/no)
Chen et al.	2020	10 years	Yes
Overton-Hennessy et al.	2022	25 days	No
Gajjar et al.	2020	3 weeks	No
Zeissig et al.	2019	3-29 days	No
Lang et al.	2018	12-15 days	No

Table 1. Prior case reports of delayed LAMS-associated bleeding since 2018

References:

- Lang GD *et al.* EUS-guided drainage of peripancreatic fluid collections with lumen-apposing metal stents and plastic double-pigtail stents: comparison of efficacy and adverse event rates. *Gastrointest Endosc.* 2018 Jan;87(1):150-157.
- Gajjar B *et al.* Massive Upper Gastrointestinal Bleeding Following LAMS (Lumen-Apposing Metal Stent) Placement. *J Investig Med High Impact Case Rep.* 2020 Jan-Dec;8:2324709620965800.
- Chen R *et al.* Splenic Artery Pseudoaneurysm Causing Massive Hematemesis 10 Years After Necrotizing Pancreatitis. *Vasc Endovascular Surg.* 2020 Jul;54(5):455-457.
- Overton-Hennessy ZC *et al.* Ruptured Splenic Artery Pseudoaneurysm Causing Hemorrhage Into a Pancreatic Pseudocyst. *Am J Forensic Med Pathol.* 2022 Mar 1;43(1):76-80.
- Zeissig S *et al.* Severe bleeding is a rare event in patients receiving lumen-apposing metal stents for the drainage of pancreatic fluid collections. *Gut.* 2019 May;68(5):945-946.

Images

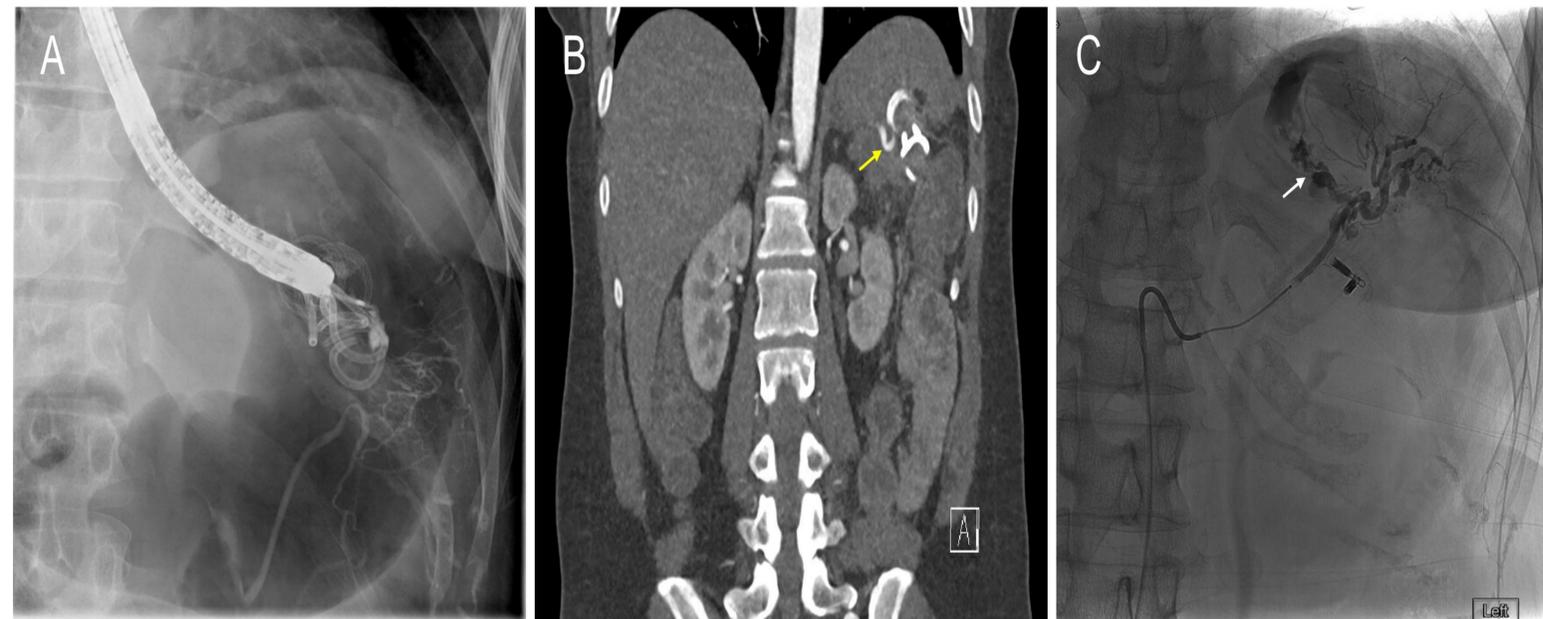


Figure 1. (A) Fluoroscopic image of contrast injection into residual cyst cavity demonstrating opacification of likely splenic vasculature; (B) Coronal images demonstrating the proximity of the LAMS to the vasculature of the splenic hilum (yellow arrow); (C) Super-selective angiography demonstrating active extravasation into the lateral aspect of the stomach from a pseudoaneurysm (white arrow) involving an inferior segmental branch of the splenic artery.

Discussion

- Visceral artery PA development after LAMS placement may be due to friction of the inner flange against vasculature surrounding the necrotic cavity as it collapses.
- Proximity of LAMS to regional vasculature increases the risk of PA development. In our case, the LAMS was placed near the rich vascular supply of the splenic hilum.
- Our case is notable for the prolonged delay between LAMS removal and bleeding presentation.

Conclusions

- Adherent scar tissue between the gastric wall and vasculature could cause delayed PA development after LAMS removal.**
- High clinical suspicion for PA bleeding is necessary for patients who have undergone distant LAMS removal who present with massive GIB.**