



# Large Visceral Arteriovenous Fistula Complicated by High-flow Portal Venous Hypertension: Endovascular Management and Outcomes

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## Introduction

- Visceral arteriovenous fistula (VAVF)
  - rare clinical entity, may present with portal venous hypertension (PVH) due to increased flow in the portal vein (PV)
- We describe two cases of VAVF:
  - one from splenic artery aneurysm (SAA) rupture into adjacent vein
  - another from a post-operative mesenteric AVF
- Both successfully treated with endovascular embolization (EE)

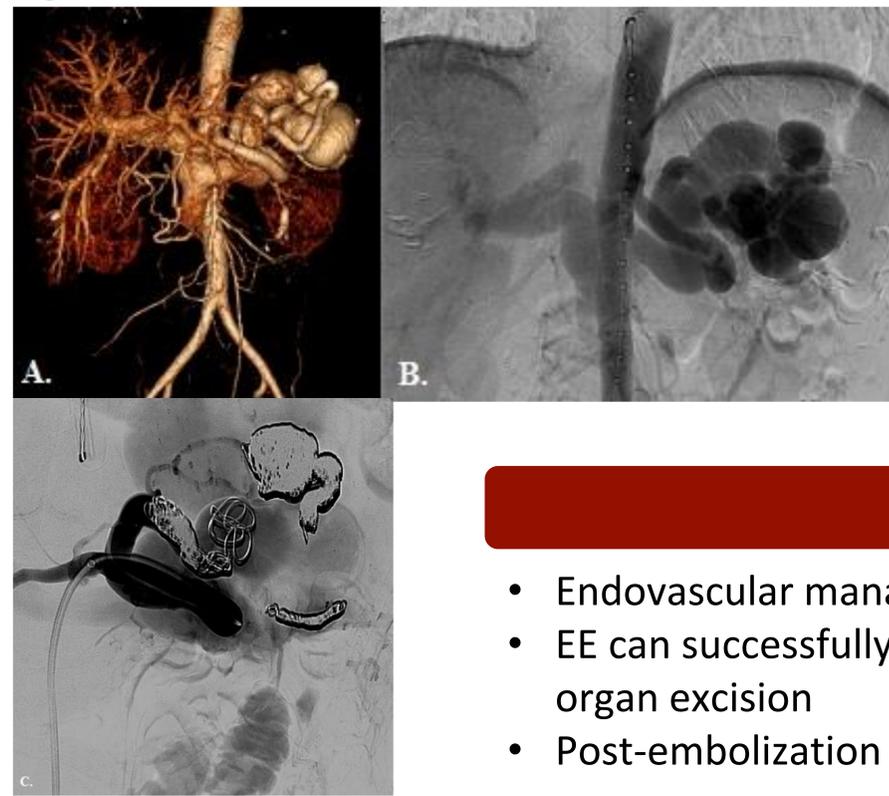
## Methods

- Retrospective case study review of 2 patients presenting with large VAVF and symptomatic PVH

## Results

- Patient 1: 44 y/o F with abdominal pain, CT showed 2 large SAAs (3.2cm;2cm) with associated AVF & PV distention (Figure 1A)
  - Underwent visceral angiogram and EE of her SAAs, the AVF source, using multiple detachable Penumbra coils (Figure 1B/1C)
  - Post-op course complicated by PV thrombosis that was treated with 6 months of anticoagulation (AC)
  - Follow up CT 8 months post-EE showed thrombosed SAA and AVF and resolved PV thrombus

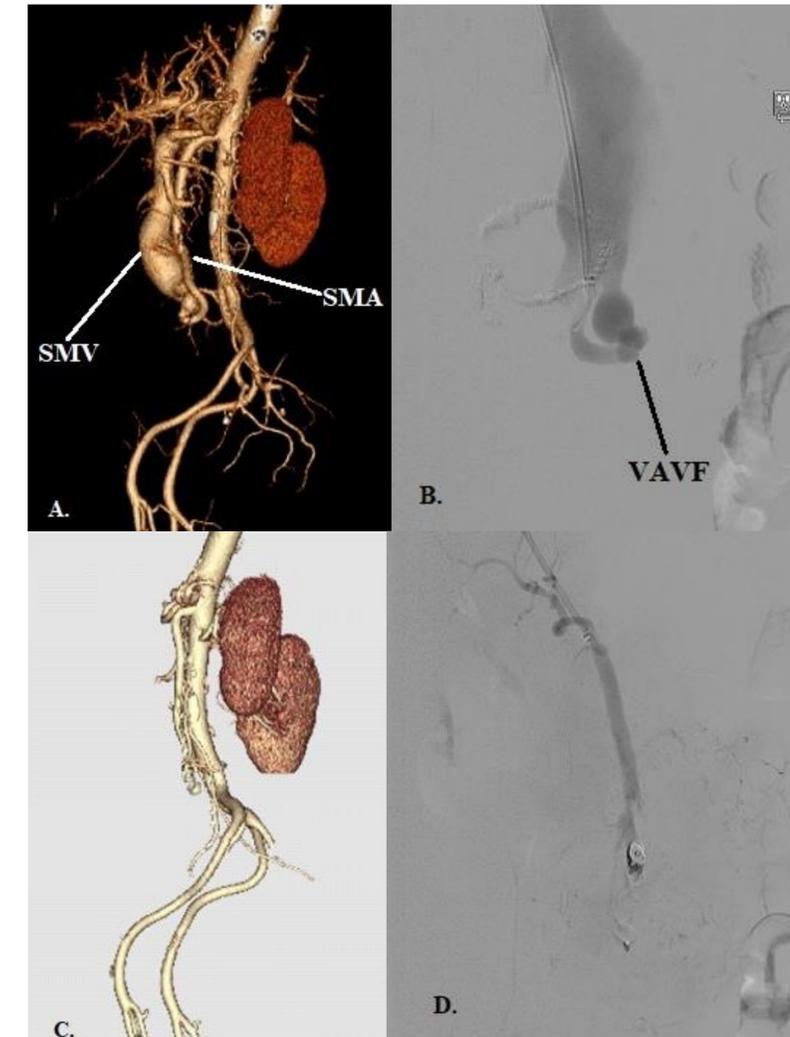
Figure 1. SAA and AVF



## Results

- Patient 2: 61 y/o F with hypertension presented with 1 week of GIB from esophageal varices. Surgical history includes hysterectomy 17 y/a complicated by bowel injury requiring resection
  - MRI & CT — large superior mesenteric AVF at or near the stapled bowel anastomosis (Figure 2A)
  - Underwent visceral angiography & EE of VAVF using Amplatzer plug and detachable Penumbra coils (Figure 2B/2D)
  - No further esophageal variceal bleeding
  - 2 month follow up CT showed significant improvement of SMV and PV dilatation and no residual AVF

Figure 2. SMA AVF



## Conclusion

- Endovascular management of VAVF causing high flow PVH is safe and effective
- EE can successfully manage the PVH and avoids potential for bleeding and necessity of end-organ excision
- Post-embolization AC is recommended due to the possibility of PV thrombosis