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# Pseudoaneurysm as the Cause of Rectal Bleeding after Low Anterior Resection

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## Introduction

- A pseudoaneurysm (PSA) represents an area of fibrous encapsulation around a pulsatile and expanding hematoma that occurs from arterial bleeding into adjacent soft tissue<sup>1</sup>
- Visceral artery aneurysms and PSAs are relatively rare with a reported incidence of 0.01 to 0.2% in routine autopsies<sup>2</sup>
- The splenic artery is the most common site of aneurysmal disease, followed by the hepatic arteries, SMA<sup>2</sup>
- Visceral PSA is most commonly caused by pancreatitis but can also be traumatic in nature as well as infectious<sup>2</sup>
- Most common symptom is abdominal pain; however rupture can lead to melena, hematochezia, or even hemorrhagic shock<sup>2</sup>

## Case Presentation

- 66-year-old male with history of stage 4A rectal cancer status-post robotic low anterior resection with complication of bleeding along pelvic sidewall (EBL 1500mL), controlled with pressure and use of vessel sealer in February 2018
- He then presented in March 2019 with per-rectal bleed, requiring 2 units of packed red blood cells
- CTA abdomen/pelvis showed active extravasation into the rectum just inferior to the anastomosis (Figure 1)
- Angiography showed a large PSA arising from proximal portion of the left inferior gluteal branch of the internal iliac artery with active extravasation (Figure 2, 3A)
- Coil embolization of left internal iliac artery with resolution of rectal bleeding (Figure 3B)

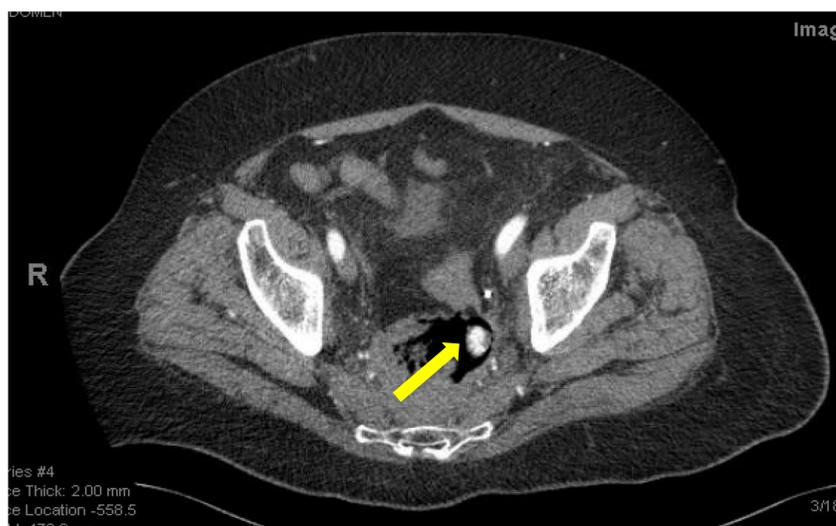


Figure 1. CTA abdomen/pelvis showing active extravasation of contrast from left inferior gluteal artery pseudoaneurysm

## Diagnosis/Treatment



Figure 2. Arteriogram of abdominal aorta showing PSA (arrow)

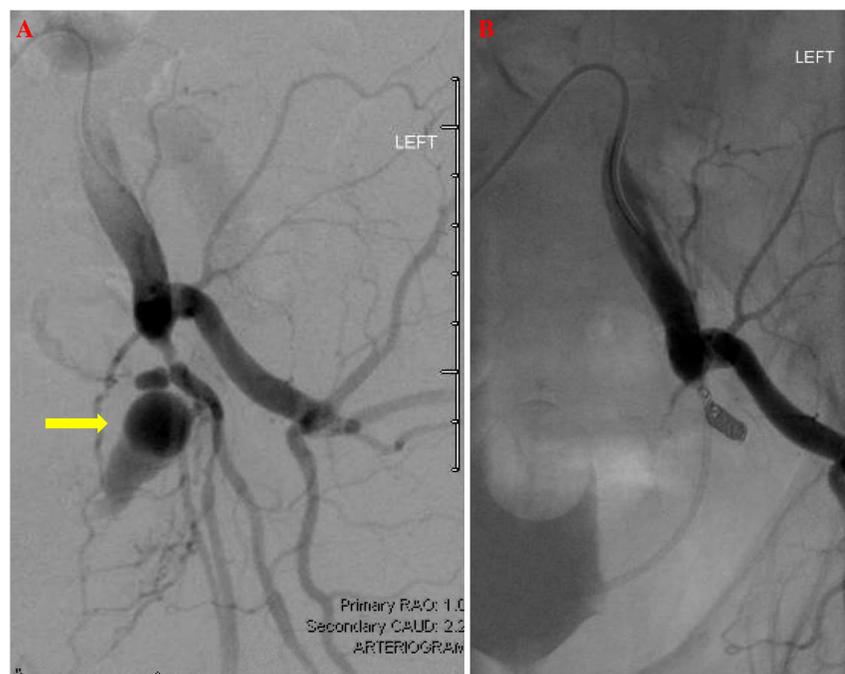


Figure 3. **A:** Selected arteriogram isolating PSA of left inferior gluteal branch of internal iliac artery with active extravasation (arrow) **B:** Post coil embolization of left inferior gluteal artery

## Discussion

- This patient had an arterio-colic fistula likely as a result of the PSA formed during the traumatic dissection performed during his low anterior resection
- Traumatic PSAs of the intra-abdominal vasculature as a complication of surgery have been reported throughout the literature; however they remain a rare cause of pseudoaneurysm<sup>4</sup>
- Isolated aneurysms of the internal iliac artery are estimated to account for only 0.3–0.4% of all intra-abdominal aneurysms<sup>4</sup>
- The most common manifestation of an inferior gluteal artery PSA is the presence of a painful mass in the buttock with potential neurological symptoms due to compression of the sciatic nerve<sup>3</sup>
- Forty per cent of patients with isolated internal iliac aneurysms will present with a rupture, with mortality estimated to exceed 50% in such patient groups<sup>4</sup>
- Angioembolization has emerged as a safe and effective method of treatment of visceral pseudoaneurysms<sup>4</sup>

## Conclusions

- This case highlights the importance of careful pelvic visualization and dissection during colectomies regardless of open vs. laparoscopic vs. robotic approach as well as the need for a broad differential diagnosis when considering etiologies of per-rectal bleeding

## References

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