

Hiding on the very last slice



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Institution: Western University



Disclosures

None

Case Presentation

ID: 68 y.o F

Relevant PMHx: 6 weeks post-Whipple for pancreatic malignancy (ductal adenocarcinoma, T2N1)

CT Abdomen/Pelvis request: Recent post-operative status, weakness and feeling unwell

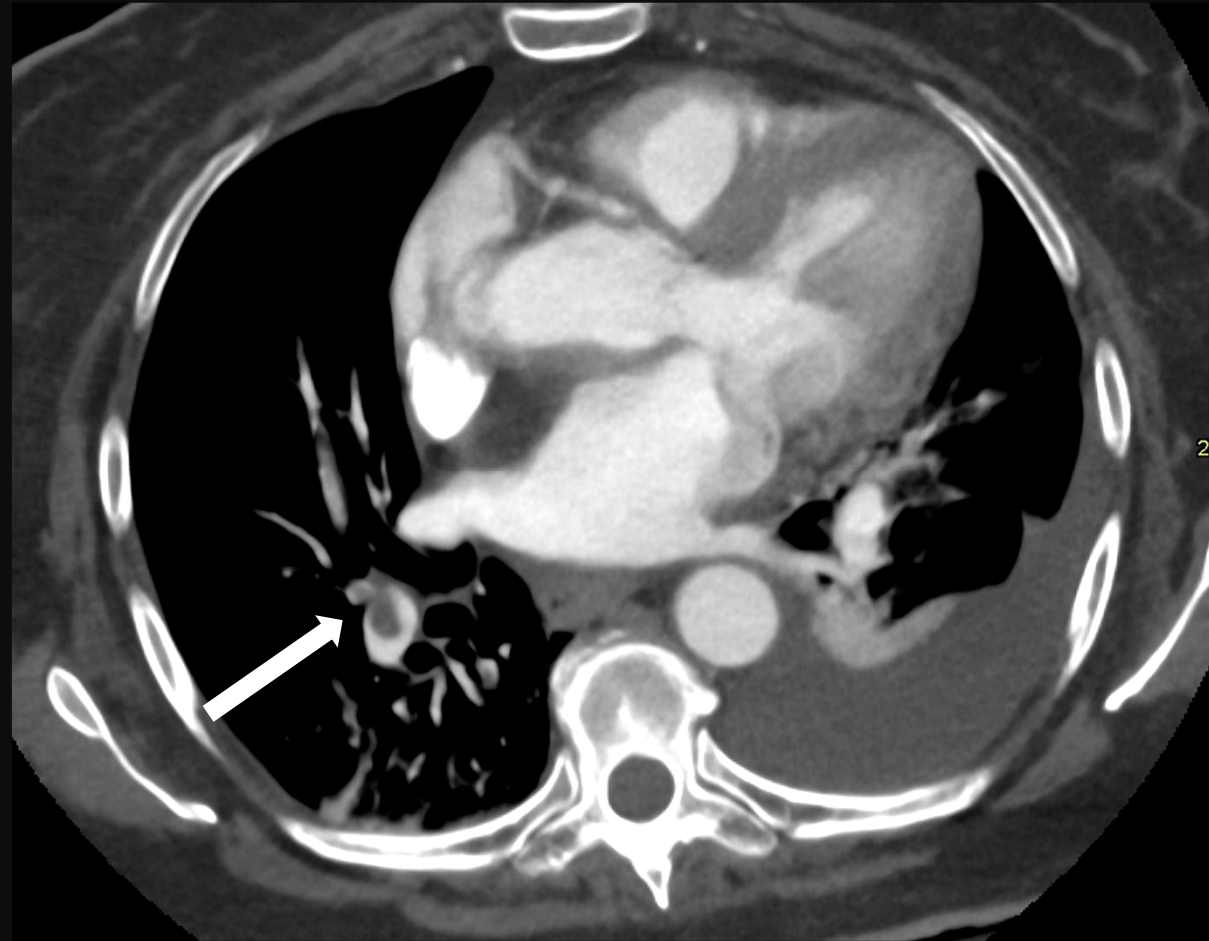
Initial Interventional Radiology Involvement

- Gas containing collection in the pancreatic surgical bed
- Request for IR drain insertion denied due to the small size of the collection
- Patient admitted and managed medically with IV antibiotics.



In-Hospital course: The first few days

- Developed moderate volume bilateral pulmonary emboli
- Started on anticoagulation treatment



Continued Hospital Course - From bad to worse

- Day 4 post admission— Patient getting set for discharge in the following days
- At 20:00 – Massive GI bleed with PEA arrest
 - ROSC obtained after 10 minutes of chest compressions
- Patient transferred to the critical care unit where a second arrest took place
 - ROSC obtained after over 25 minutes of resuscitation efforts
- Massive blood transfusion protocol initiated
- Patient transferred to the OR (A case) without further imaging due to instability

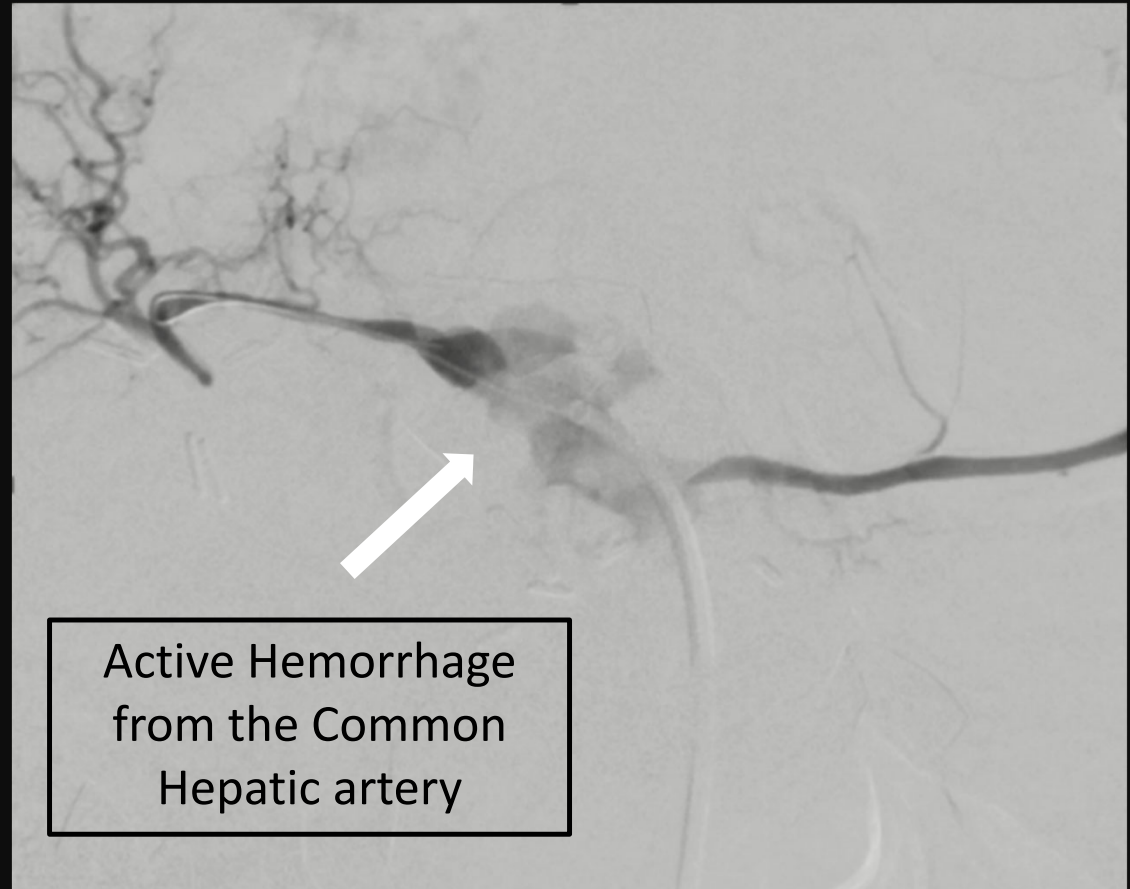
In the Operating Room

- Pancreatic head resection cavity dissected
 - found to be the site of massive active bleeding
- The exact source of the hemorrhage could not be identified or controlled
- Abdomen packed and Interventional Radiology consulted
- Transferred to a hybrid Vascular OR with an Angio suite
 - Angiogram +/- embolization



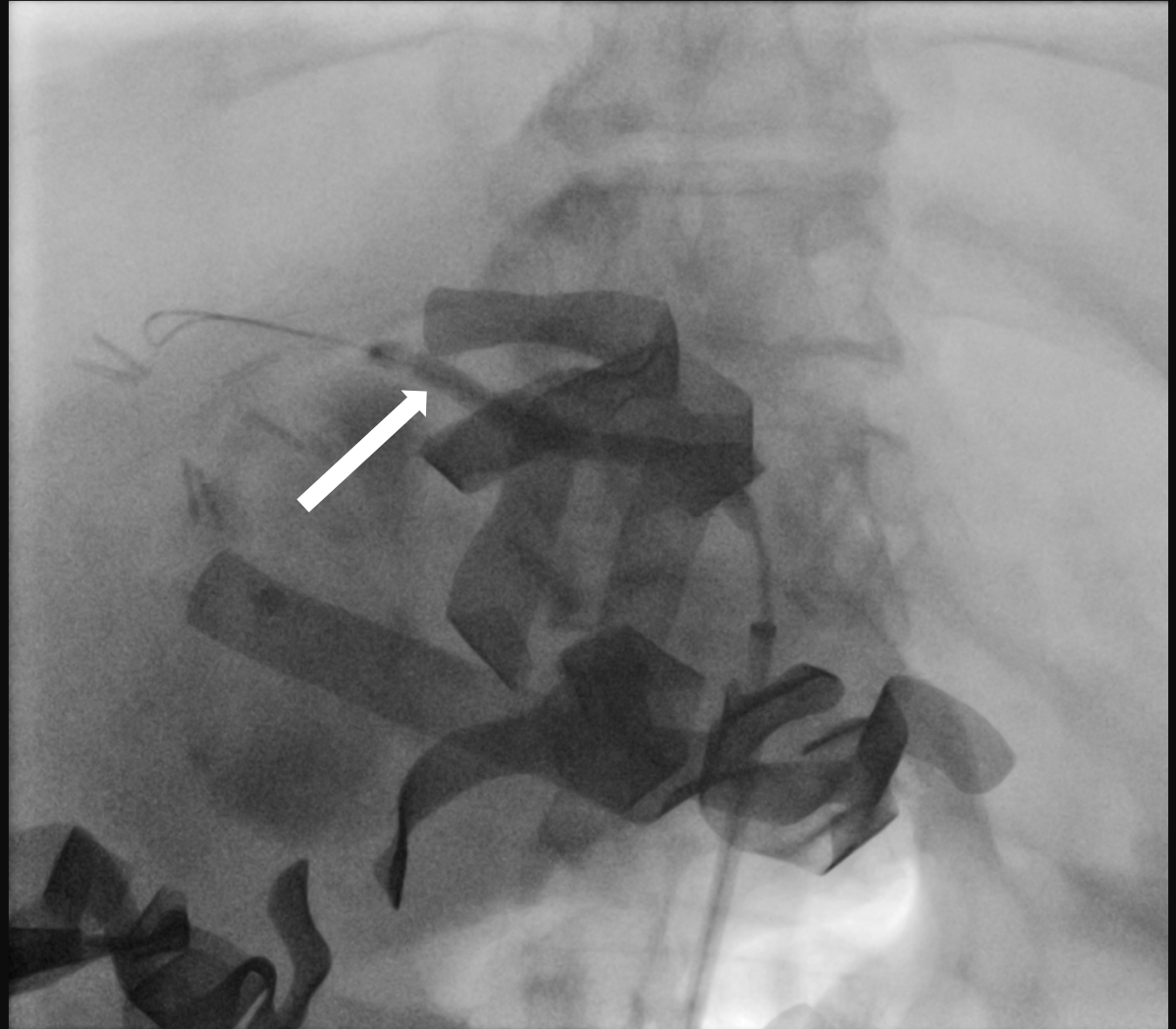
The “Oh No” moment

- Access obtained via a previously placed left femoral arterial line
- Exchanged over a peripheral vascular guidewire, followed by the insertion of a 5F vascular sheath
- 5F C2 catheter advanced to the celiac axis for angiogram completion



The first rule of bleeding

- A hydrophilic coated guidewire was quickly advanced into the distal common hepatic artery
- A 4 x 8 mm balloon loaded catheter was placed and inflated for temporary control
- Resulted in near immediate improvement of blood pressure measurements



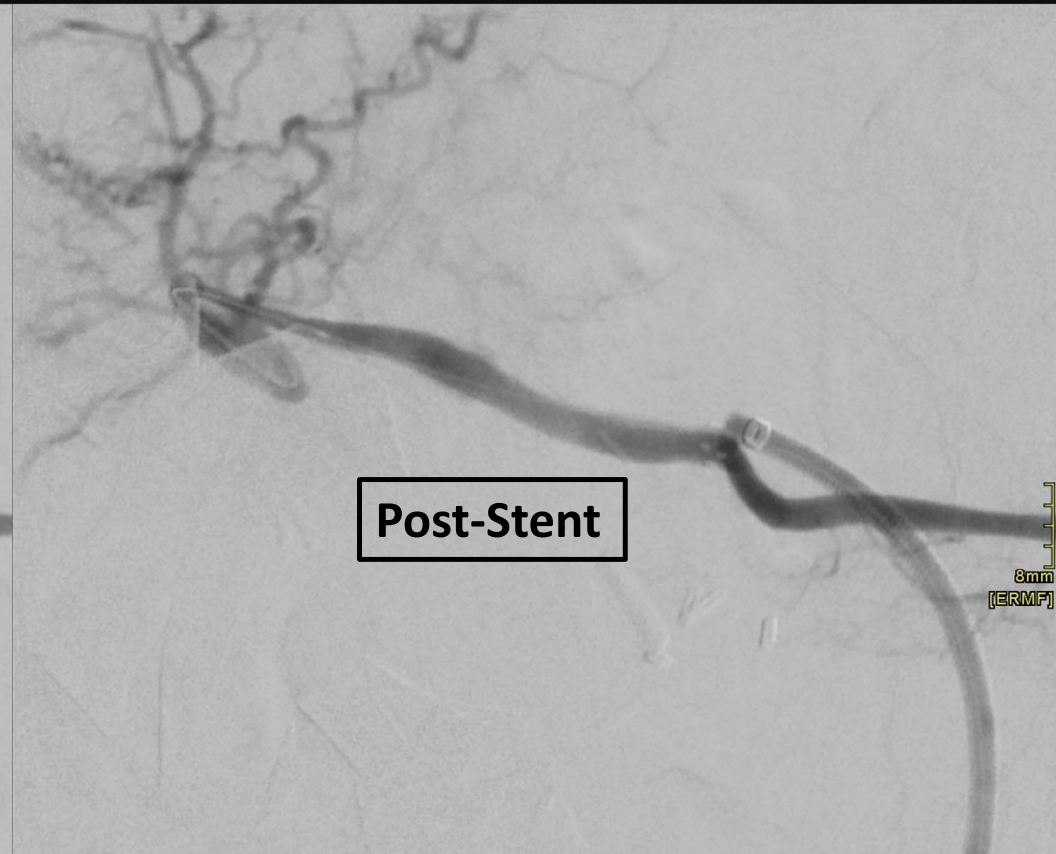
Covered stent to the rescue

- The 5F vascular sheath was exchanged for a 7F - 55cm long sheath
- A 5 x 50 mm self-expanding PTFE stent graft was successfully deployed
- Transferred to the ICU for continued post-operative resuscitation





Pre-Stent



Post-Stent

8mm
[ERMP]

Massive Transfusion Protocol

Pre-IR Stenting - 20:40 to 23:53:

pRBC – 28 units

FFP – 20 units

Platelets – 4 units

During and after stenting - 00:30 to 10:47:

pRBC – 10 units

FFP – 12 units

Platelets – 2 units

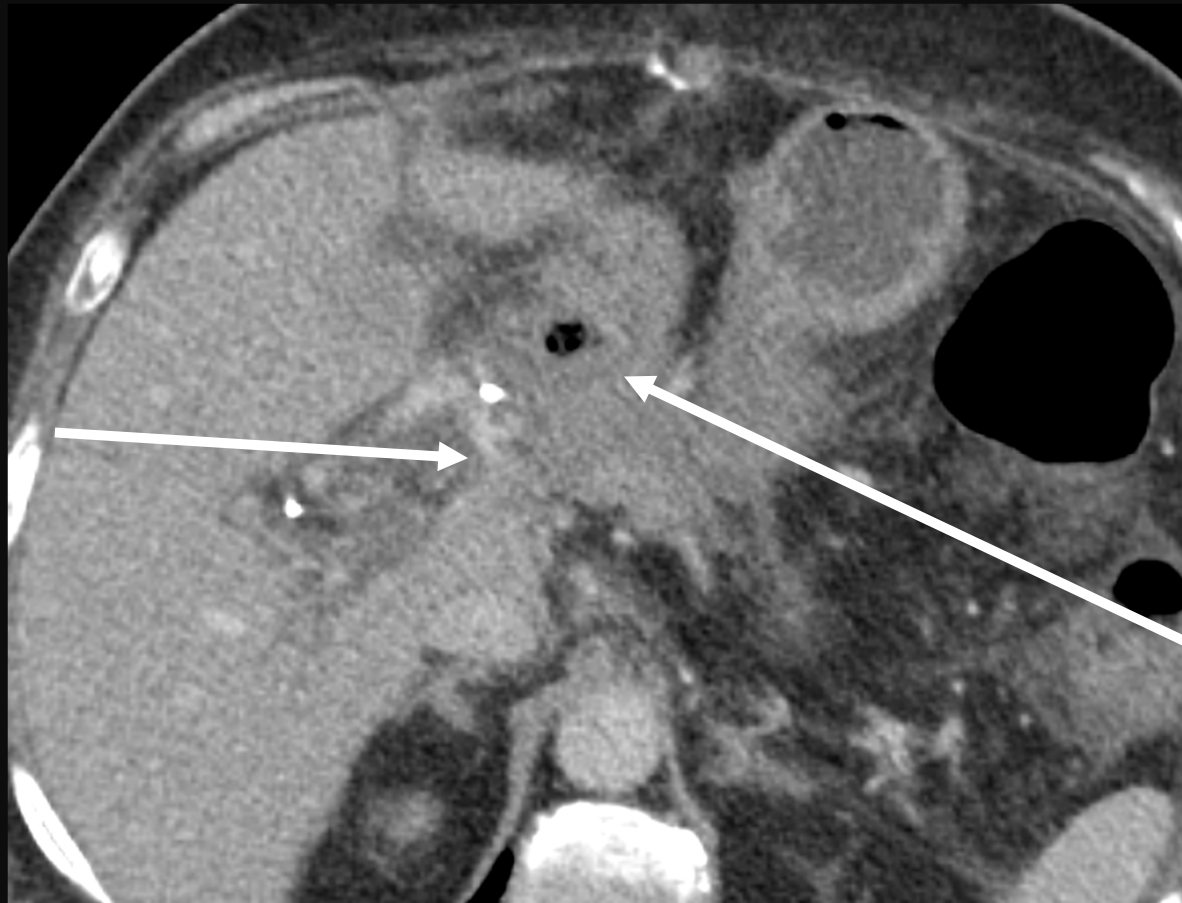
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2022/03/10 21:46	PLATELET POOL
2022/03/10 21:44	RED BLOOD CELLS
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2022/03/10 20:59	FROZEN PLASMA
2022/03/10 20:59	FROZEN PLASMA
2022/03/10 20:57	HUMAN PROTHROMBIN COMPLEX
2022/03/10 20:54	PLATELETS SINGLEDONOR IRRADIATED
2022/03/10 20:40	RED BLOOD CELLS
2022/03/10 20:40	RED BLOOD CELLS
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2022/03/10 20:40	RED BLOOD CELLS

The recovery

- Abdomen surgically closed on post-procedure day 2
- Transferred from the floor on post-procedure day 17
- No recurrent major bleeding episodes
- Resolved post-OR acute kidney injury and transient neurological deficits

Looking through the Retrospect-o-scope

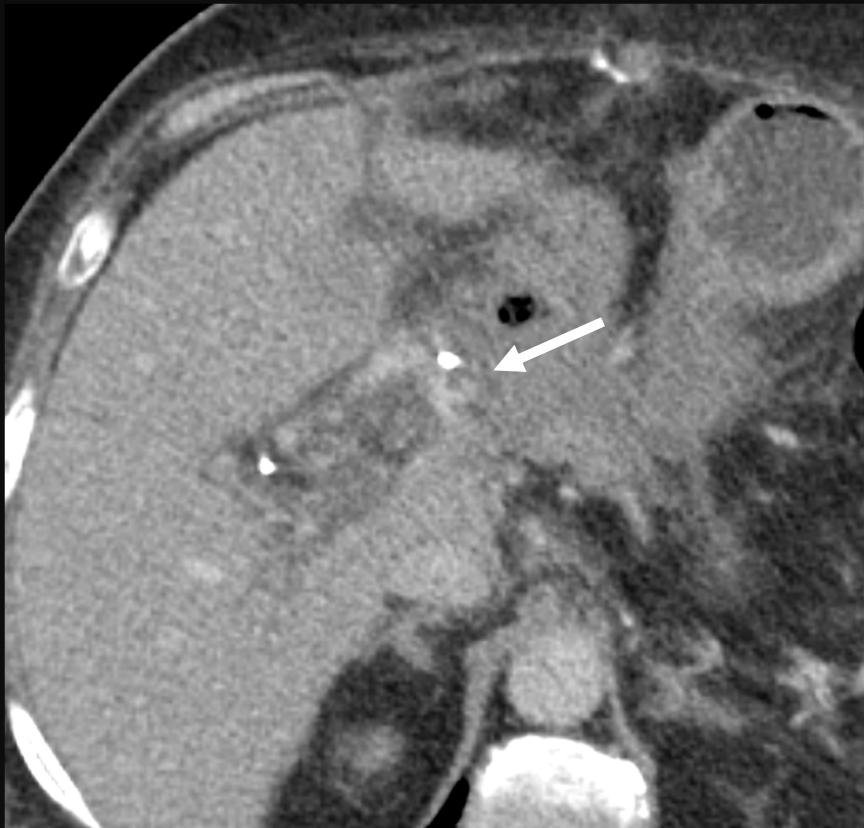
Common
Hepatic
Artery



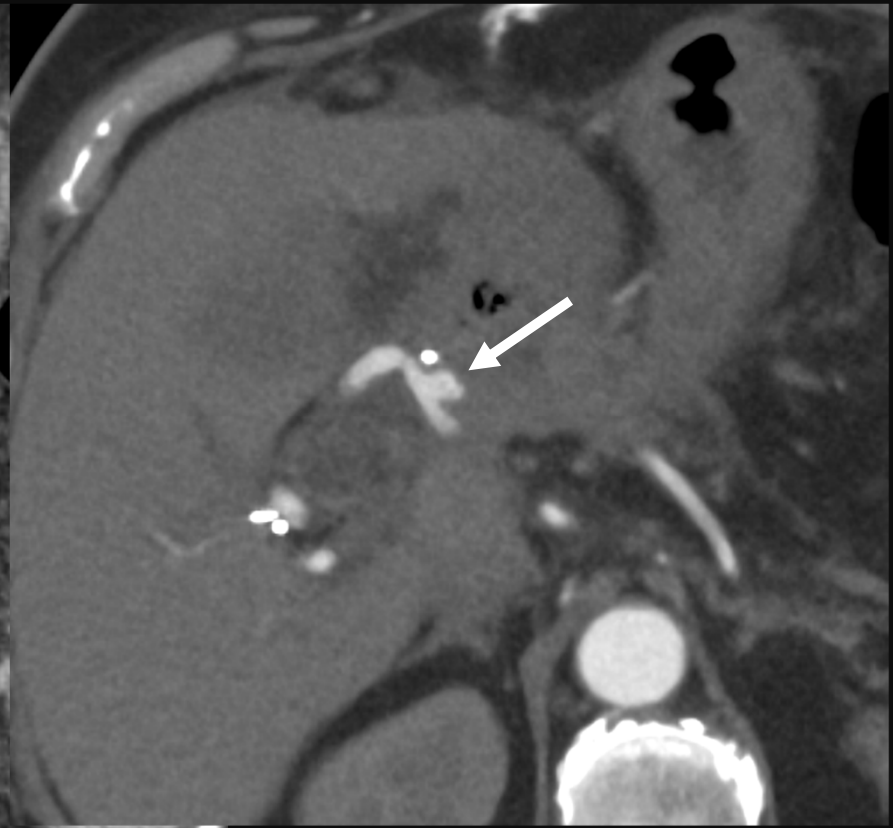
Gas
containing
collection

On the very last slice

CT A/P Portal Venous - Admission



CTPA – Day 1 Post Admission



Pre-Stent

**Post-
Stent**



Learning points

- In complex cases, interdisciplinary collaboration is key
- A well executed massive transfusion protocol is a powerful tool
- The answer is always in the bag