

Case 3

41M 李X欽

Bloating stomach sensation for months

Images

- 2018-09-27 Abdomen CT
- 2018-10-23 Angiography

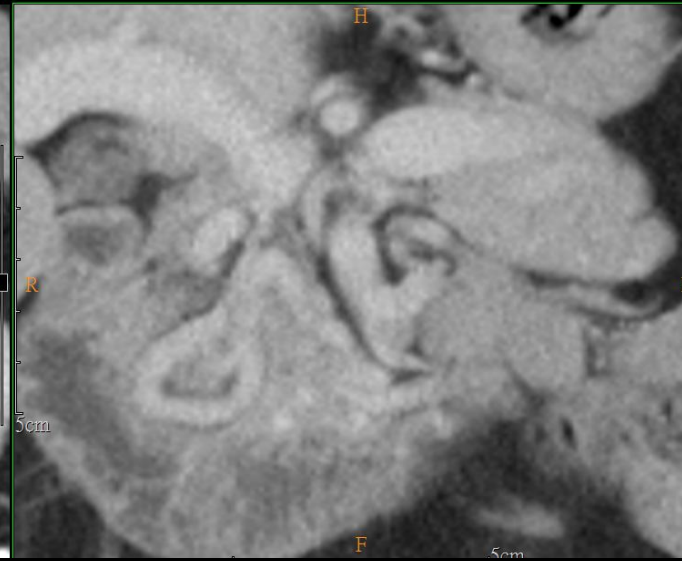
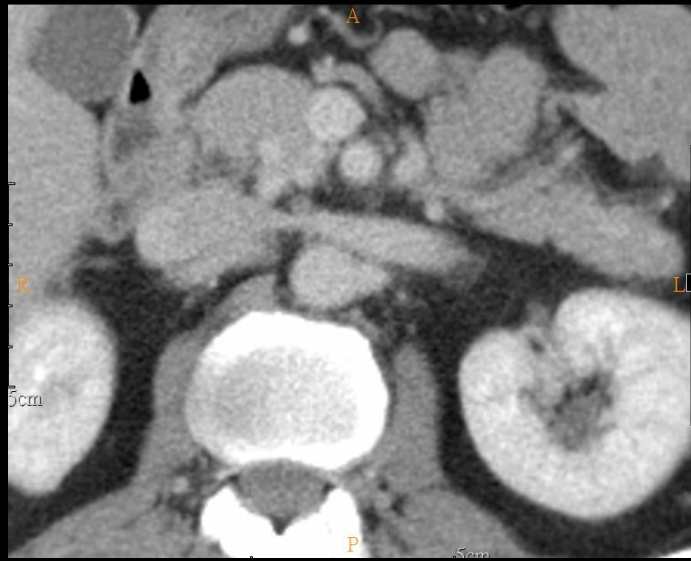
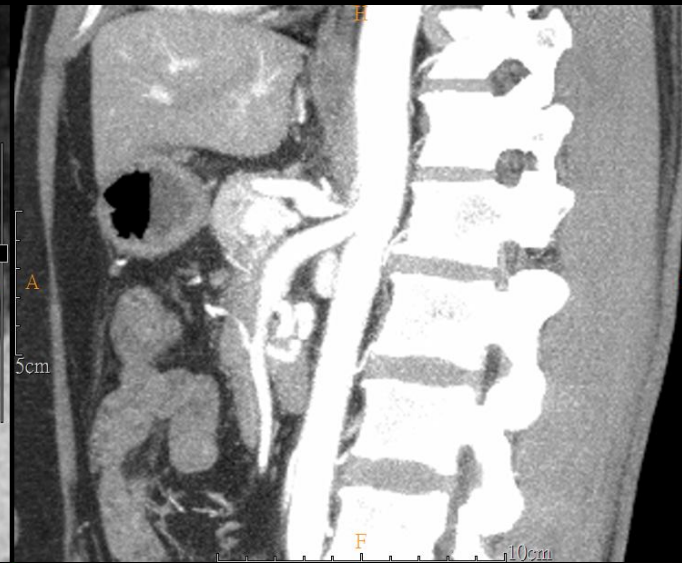
Case 4

67M 易X田

Asymptomatic

Images

- 2018-10-23 Abdomen CT
- 2019-01-29 Angiography

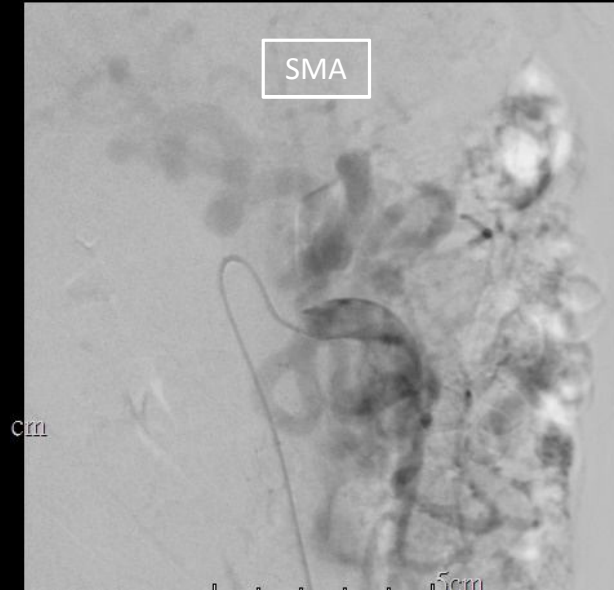
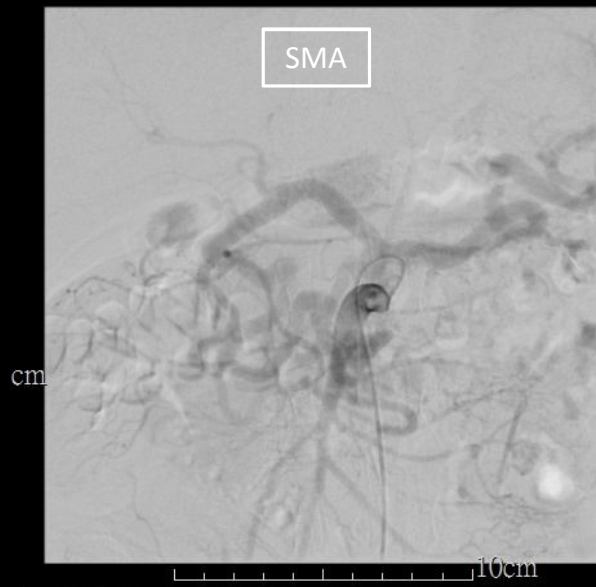


Case 3

Engorged arteries at peripancreatic region (pancreaticoduodenal arteries)

Celiac stenosis or median arcuate ligament syndrome

Suggest angiography check up



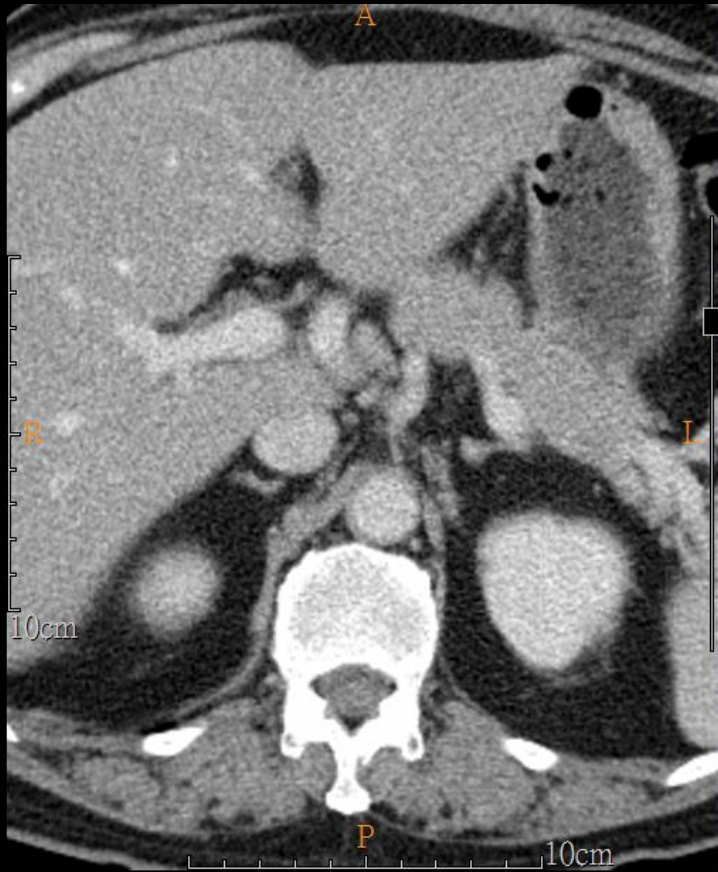
Case 3

SMA angiography: engorged pancreaticoduodenal arteries and GDA, with blood flow into celiac trunk

Celiac angiography: only left gastric artery and splenic artery. No hepatic flow

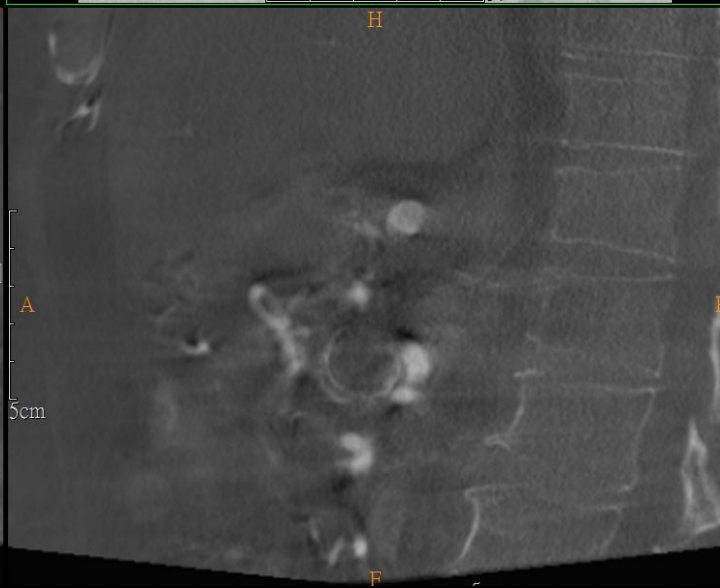
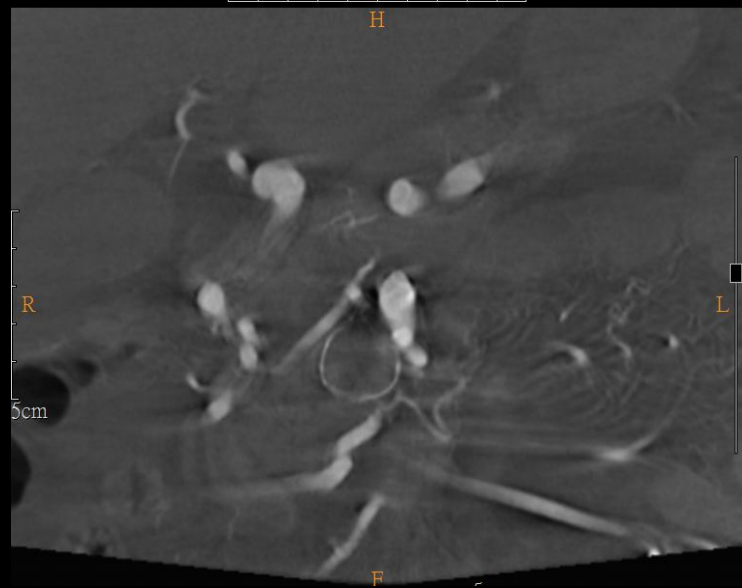
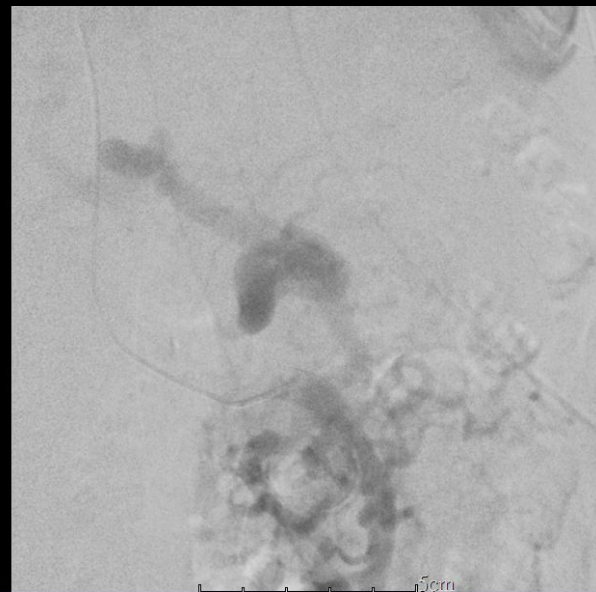
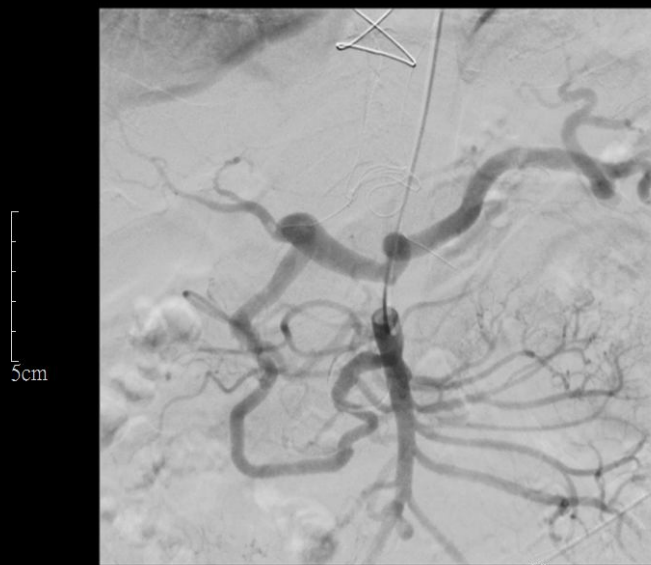
Case 3 - Diagnosis

- A high grade stenosis at ostium of celiac trunk, possibly due to median arcuate ligament syndrome
- Engorged pancreaticoduodenal arteries and GDA, with blood flow from SMA into celiac trunk



Case 4

Celiac stenosis
Aneurysm formation near pancreaticoduodenal artery



Case 4

SMA angiography: reverse flow from pancreaticoduodenal artery to GDA

Failed to approach celiac trunk

Suggest release the celiac stenosis (consult GS) or consult CVS for creating graft between aorta to celiac/splenic/hepatic artery

Case 4 - Diagnosis

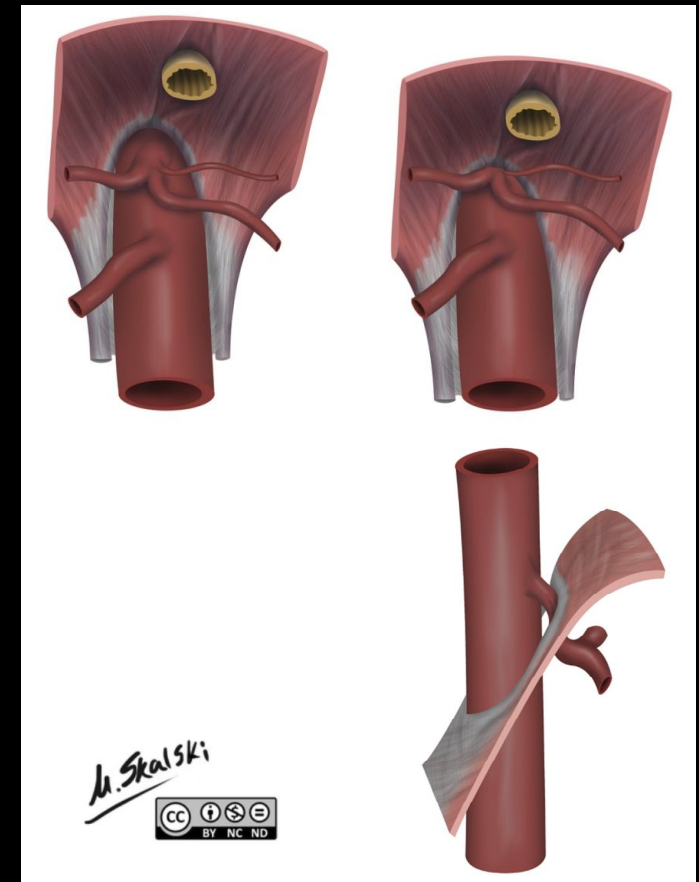
- Median arcuate ligament syndrome
- Engorged pancreaticoduodenal arteries and GDA, with blood flow from SMA into celiac trunk
- Pancreaticoduodenal aneurysm formation

Discussion

Median arcuate ligament syndrome

Median Arcuate Ligament Syndrome

- Abnormally low insertion of median arcuate ligament that compresses on proximal celiac axis resulting in clinical symptoms
 - Abdominal pain
 - Weight loss
 - Nausea
- Focal stenosis of celiac trunk with a hooked appearance due to the superior indentation in the end-inspiratory phase



Median Arcuate Ligament Syndrome

- **Clinical manifestations**

- The most common symptoms are abdominal pain and weight loss
- An epigastric bruit is frequently present on physical examination
- The typical age of presentation is young (20 to 40 years)

- **Treatment**

- Surgical decompression performed laparoscopically by dividing the median arcuate ligament.

- **Complications**

- Pancreaticoduodenal artery increased blood flow; aneurysm and bleeding

Image Findings

- Upward angulation or superior indentation on celiac axis, usually within 5 mm of origin
- On color Doppler, poststenotic dilation &/or turbulence of flow may be present
- On duplex Doppler, increased peak systolic velocity in proximal celiac artery of 200-350 cm/s or double velocity in aorta
 - Deflection angle $> 50^\circ$ highly sensitive in symptomatic patient
- Diagnosis cannot be made on imaging alone



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***Visual Diagnosis
in Emergency Medicine***



CrossMark

AN UNUSUAL CASE OF ACUTE RETROPERITONEAL HEMORRHAGE: DISSECTING ANEURYSM OF THE INFERIOR PANCREATODUODENAL ARTERY

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A 42-year-old woman

CC: sudden onset of abdominal sharp pain radiating to the back, accompanied by cold sweats and vomiting

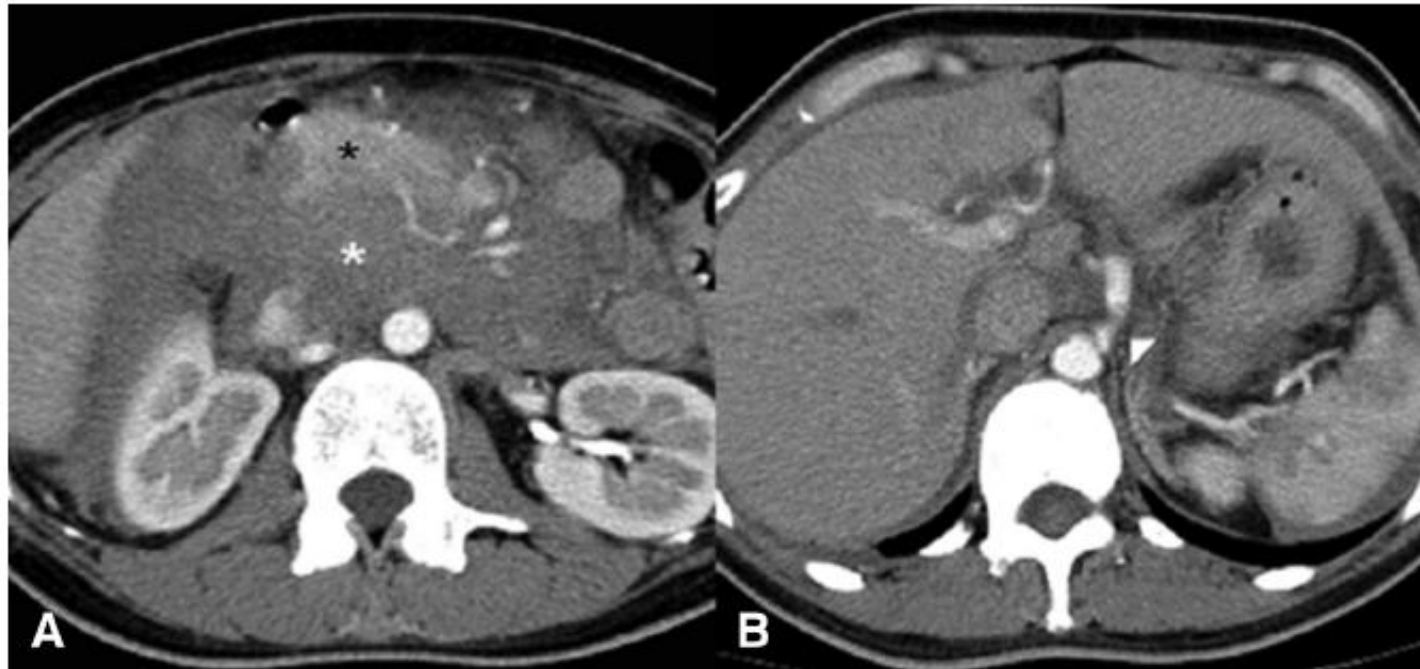


Figure 1. Abdominal contrast-enhanced computed tomography scan demonstrating (A) a massive retroperitoneal hematoma (white asterisk) surrounding the pancreas (black asterisk) over the retroperitoneal space and (B) celiac artery stenosis (arrowhead) and post-stenotic dilatation.



Figure 2. Oblique coronal maximal-intensity projection reconstruction image of abdominal computed tomography angiography depicting inferior pancreaticoduodenal artery dissecting aneurysms (arrows) with a typical "string of beads" appearance connecting to the superior pancreaticoduodenal artery.

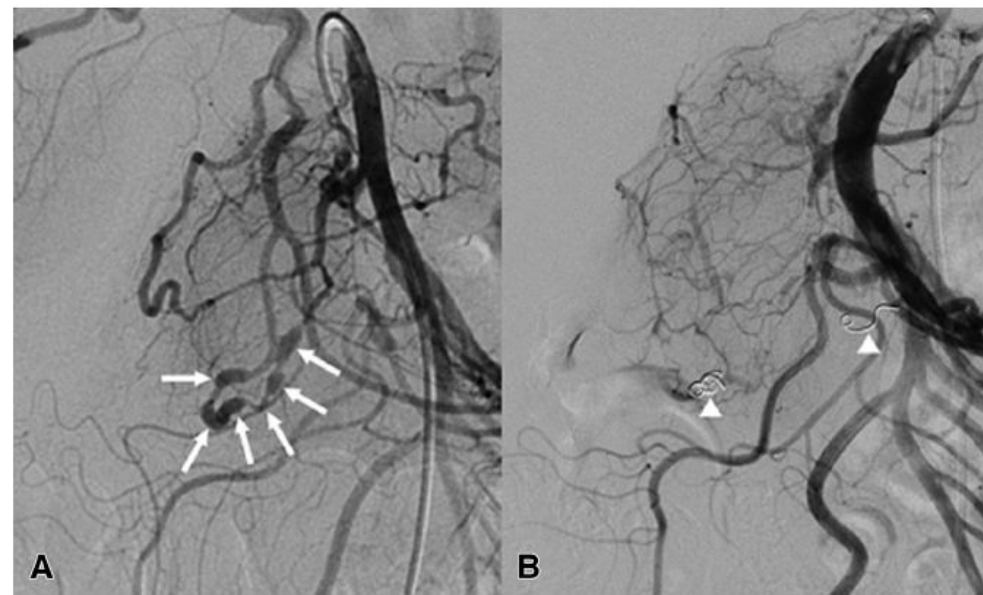


Figure 3. (A) Anteroposterior superior mesenteric artery angiogram confirmed the diagnosis of inferior pancreaticoduodenal artery dissecting aneurysms (arrows), and (B) coil embolization was performed successfully (arrowheads) using the "sandwich technique."

Dissecting aneurysm with a typical 'string of beads' appearance
 Caused by high intra-arterial blood pressure secondary to celiac artery stenosis
 First choice management: endovascular intervention