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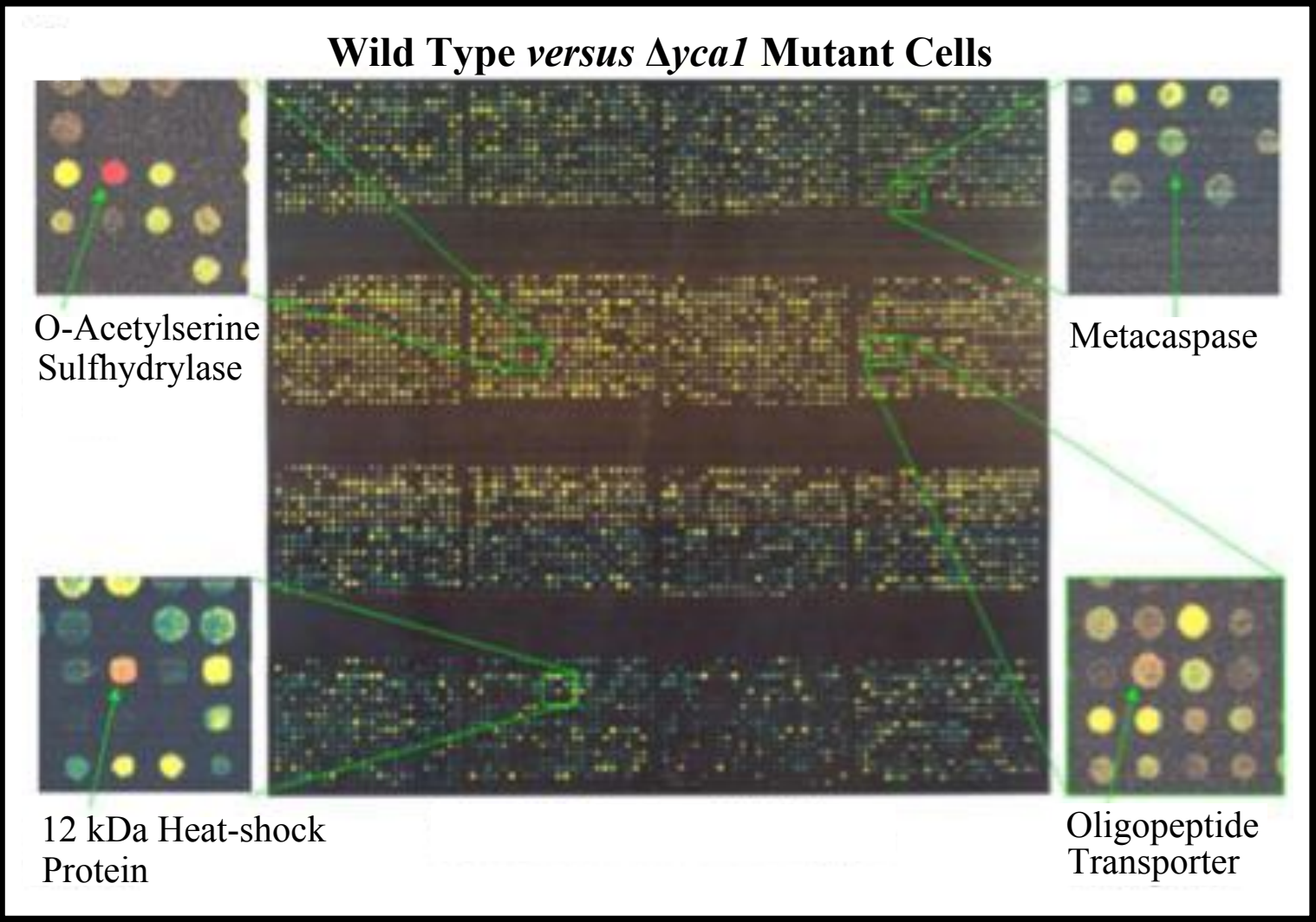

Yeast Mutant Whole Genome Microarray

Unusual Cause of Acute Upper Gastrointestinal Bleeding: Splenic Artery Pseudoaneurysm

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Abstract
Splenic artery pseudoaneurysm is a rare cause of Upper Gastrointestinal Bleeding (UGIB). We present a challenging case of massive UGIB which was managed by coil embolization in the interventional radiology suite.

Background
Splenic artery pseudoaneurysm can be caused by perforating gastric ulcer, pancreatitis, pancreatic mass or injury (trauma or surgery). The pseudoaneurysm can invade into the surrounding structures (including stomach and colon) which may cause brisk gastrointestinal bleeding. There is an associated high risk of mortality and high risk of rebleeding in the survivors. Although managing these complications can be challenging, advances in imaging and interventional radiology have changed the management paradigm.

Case Description
Patient is a 64 years old male with a past medical history of alcoholism, chronic pancreatitis, laryngeal squamous cell cancer treated with radiation, Barrett's esophagus and recent admission with septic shock due to bilateral obstructing renal stones with pyelonephritis complicated by AKI requiring transient HD.

Patient was most recently admitted 7 days ago with sepsis due to C-Diff colitis which had been improving with oral Vancomycin. While in-house, he developed sudden onset large volume hematemesis. Patient experienced 2 episodes of emesis in short sequence with an estimated 400 ml of bright red blood with clots.
Of note, most recent Esophagogastro-duodenoscopy (EGD) demonstrated no varices, however, an esophageal ulcer was identified which was not actively bleeding at the time.

Management/Treatment
Patient became hypovolemic and was transferred to ICU. He was intubated and put on vasopressors. His laboratory work up demonstrated a HCT drop from 30.1 to 18.6% in a period of 24 hours. Massive transfusion protocol was started.
An emergent EGD was performed that showed fresh blood and clots in the esophagus and stomach, however, procedure was aborted due to limited visualization. An abdominal CT scan was then performed that showed distended stomach with blood and clots and large volume active bleeding from posterior wall of gastric fundus (Fig. A). There was Pneumoperitoneum and hemorrhage seen throughout the upper abdomen.
Patient was brought to the operating room for an emergent exploratory laparotomy. 6.5 liters of blood and clot were drained from the abdomen. A 12 cm acute tear was found along the lesser curvature, without active bleeding from the edges. Pancreas was not distinguishable from the retroperitoneal tissue, consistent

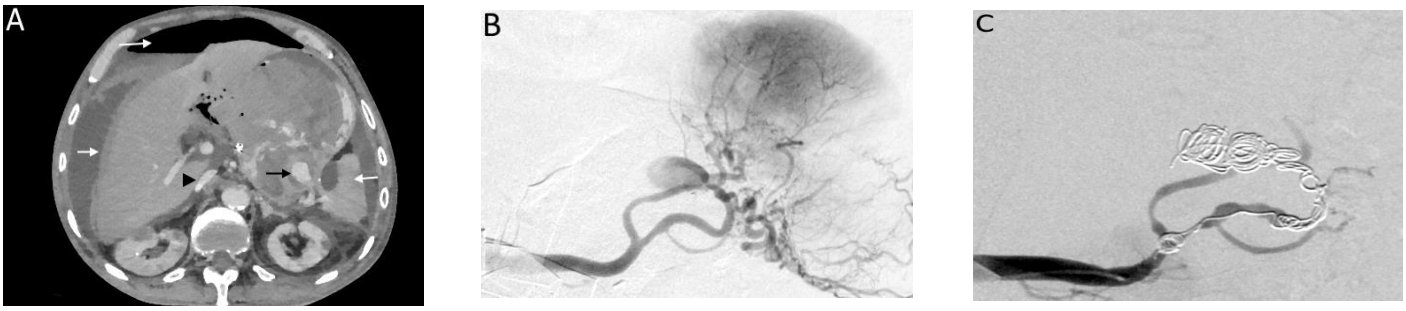

Fig. 1 (A) Abdominal CT scan demonstrates large volume active bleeding from posterior wall of gastric fundus (black arrow), blood and clots in massively distended stomach, gastric perforation evidenced by pneumoperitoneum & hemorrhage throughout the upper abdomen (white arrows), flattened IVC due to hypervolemia (arrow head). (B) Late arterial phase DSA of the celiac axis demonstrates opacification of the splenic artery, its branches and spleen parenchyma. Contrast is also filling an ovoid shaped pseudoaneurysm arising from the splenic artery adjacent to the splenic hilum. (C) DSA after embolization demonstrates coils and no contrast within the pseudoaneurysm.

with severe chronic pancreatitis. Splenic artery was thickened with a rind to it. An extremely friable 3 x 3 cm mass was seen in the posterior fundus area. Despite the use of Argon beam, figure-of-eight suture, fibrin sheets and focal pressure, hemostasis could not be achieved. By consensus, it was decided that the best way to control the bleeding was splenic artery embolization, therefore, angiogram and embolization was pursued.

Initial celiac artery Digital Subtraction Angiography (DSA) demonstrated a large splenic artery (1.6 x 1.0 cm) ovoid shaped pseudoaneurysm (Fig. B). A super-selective arteriogram showed a large disruption in the arterial wall under the pseudoaneurysm. The aneurysmal defect and the branch leading to the aneurysmal defect were packed with coils (Fig. C). Subsequent super-selective arteriogram demonstrated no evidence of filling of the aneurysm. Patient was transferred back to ICU.

Outcome

Patient was returned to the operating room on POD2 for washout of abdomen, placement of venting G-tube and feeding J-tube, abdominal VAC placement and delayed primary closure of the abdomen. He was discharged to acute rehab on POD17 with HCT of 26.9%. Most recent follow up is 98 days post procedure. The patient is doing well and the G- and J-tubes have been removed. No new episode of UGIB has been reported.

Acknowledgments

None.

Conflict of Interest

None.

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