



INTRODUCTION

- Roux-en-Y gastric bypass (RYGB) is a widely used surgery in the management of obesity
- Common late complications of RYGB include¹:
 - Anastomotic stricture, small bowel obstruction, internal hernia, dumping syndrome, cholelithiasis, malnutrition, marginal ulceration, gastro-gastric fistula
- Gastropericardial fistulas are an extremely rare but life-threatening late complication
 - < 70 cases in modern literature from review in 2016²
 - Mean time of presentation 84 months after surgery (median 60 months)²
 - Prior operative risk factors include open or laparoscopic Nissen fundoplication³, esophagectomy⁴, hiatal hernia repair⁵, laparoscopic gastric banding⁶ & RYGB⁷

CASE PRESENTATIONS

We present a case of a 51-year-old male patient, with hypertension and type II diabetes, who underwent an uncomplicated RYGB in 2018.

Admission 1

June 24, 2022 – June 30, 2022

- 5 months of abdominal pain, afebrile, normal vital signs, ECG sinus rhythm & left axis deviation
- CT (Figure 1) - perforated marginal ulcer with abscess cavity extending from diaphragm to the pericardium with an associated pericardial abscess
- Surgery 6/24/2022
- CT (Figure 2) – stent position post operatively
- Follow up CXRs in clinic indicated correct stent placement

Admission 2

July 23, 2022 – August 2, 2022

- 2 days of abdominal pain and vomiting
- CT (Figure 3) – migrated stent resulting in small bowel obstruction
- Surgery 7/23/2022
- Admission c/b pelvic abscess, status post CT-guided drainage (Figure 4)

Admission 3

October 17, 2022 – present

- 4 days of epigastric abdominal pain
- CT (Figure 5) – thinned myocardium & gastro-gastric fistula
- Surgery 10/25/2022
- Admission c/b abdominal abscess, status post ultrasound-guided drainage

IMAGING

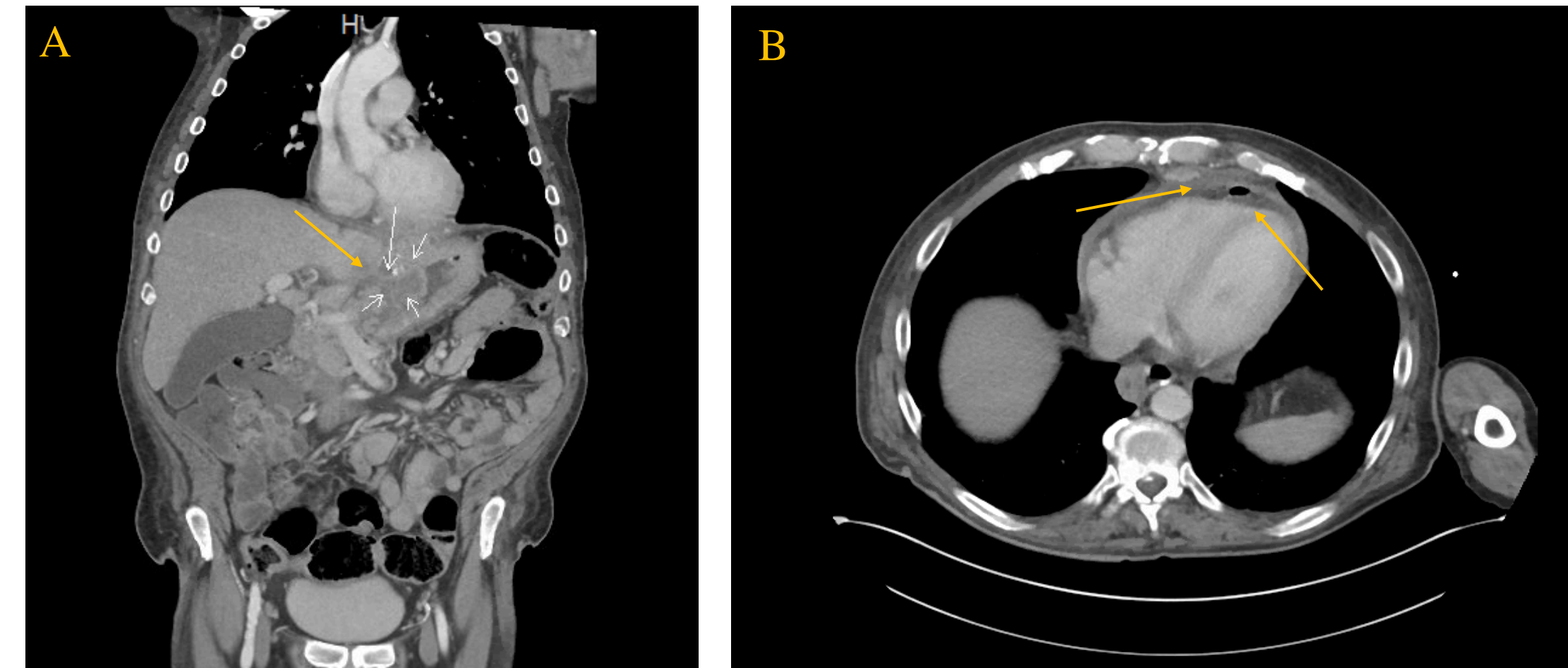


Figure 1: CT abdomen and pelvis with IV contrast (6/23/2022). (A) Arrows indicate perforated marginal ulcer at the level of the gastrojejunal anastomosis with the formation of a walled off intra-abdominal abscess tracking through diaphragm. (B) Arrows indicate the formation of a pericardial abscess with pneumopericardium.

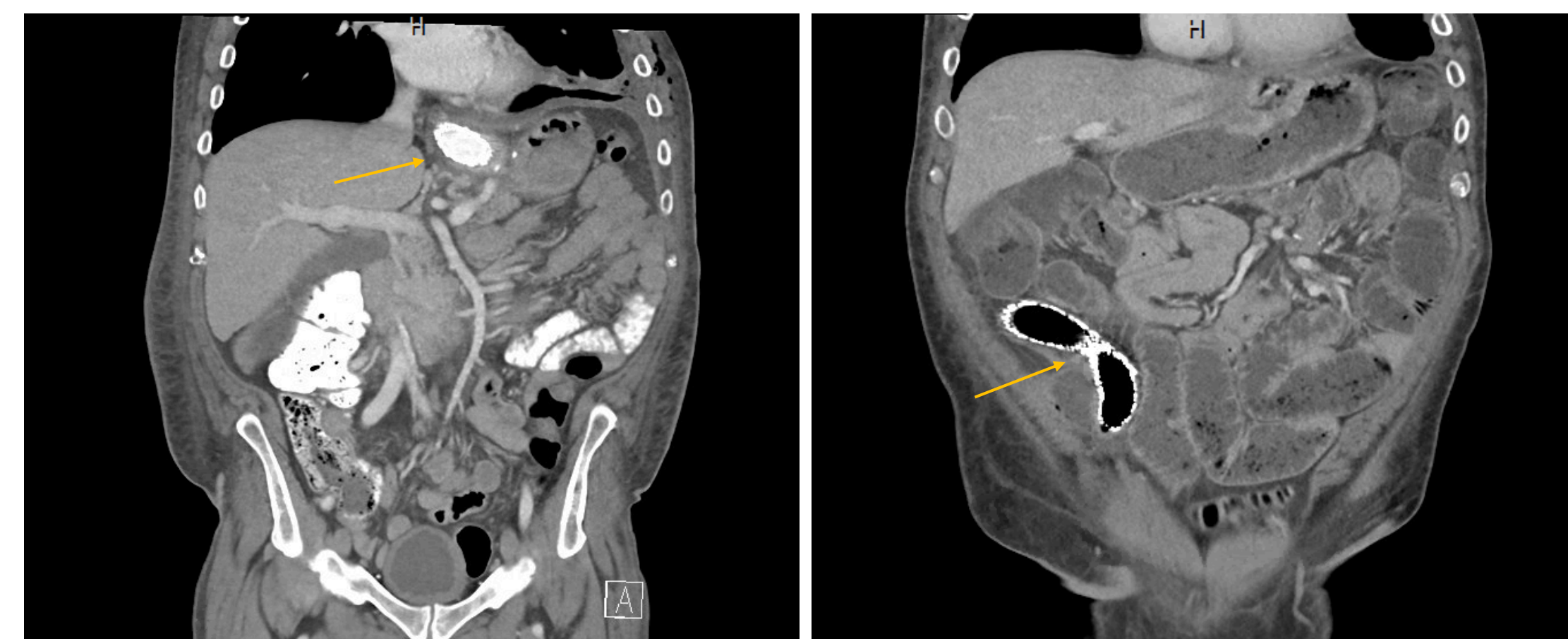


Figure 2: CT abdomen and pelvis with IV and oral contrast (6/28/2022). Arrow indicates stent overlying the GJ junction with no extravasation of contrast.

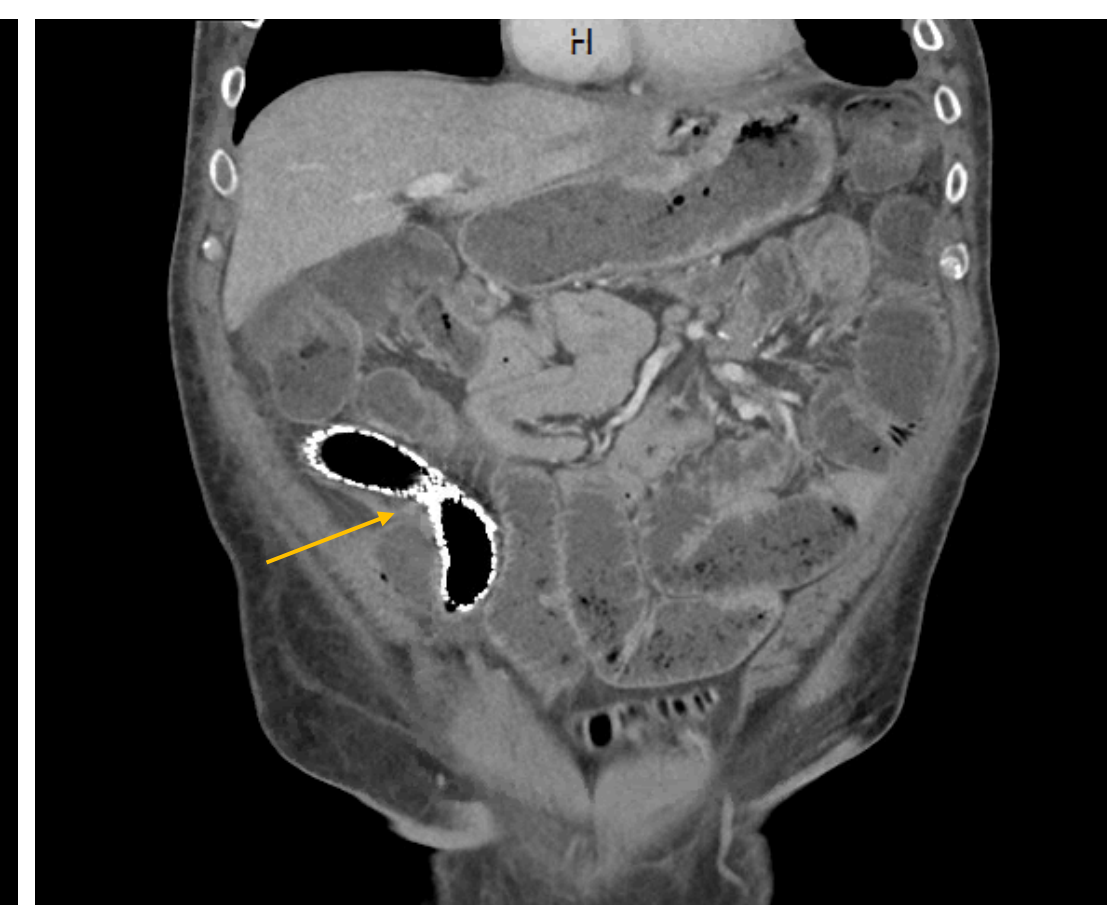


Figure 3: CT abdomen and pelvis with IV contrast (7/23/2022). Arrow indicates migrated stent.



Figure 4: CT abdomen and pelvis with IV contrast (7/27/2022). Arrow indicates pelvic fluid collection.

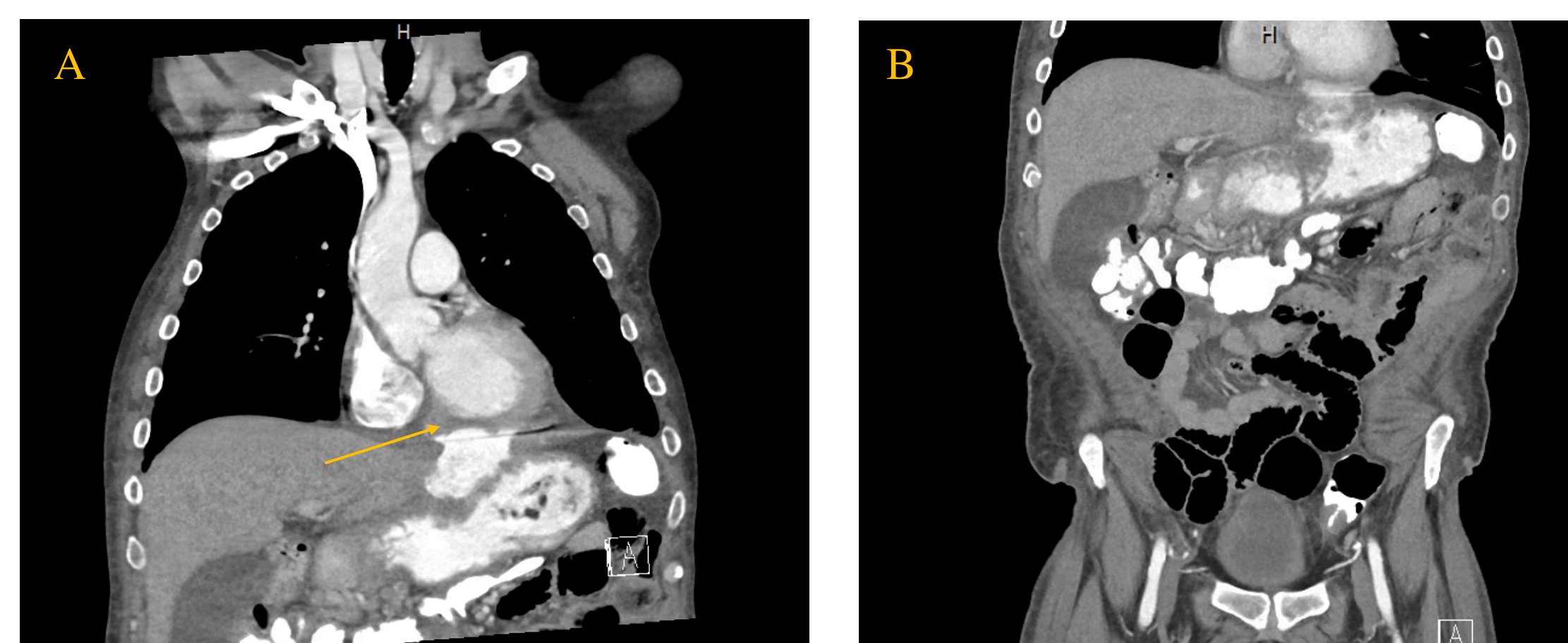


Figure 5: CT chest with IV and oral contrast (10/18/2022). (A) Arrow indicates a thinned myocardium over the left ventricle which is directly adjacent to a contrast-filled stomach. No contrast in the pericardium. (B) Visualization of known gastro-gastric fistula.

SURGICAL MANAGEMENT

Repair of Gastropericardial Fistula with Stent Placement

June 24, 2022 - Thoracic & Bariatric Surgery

Diagnostic laparoscopy, lysis of adhesions, left mini thoracotomy, pericardiotomy, drainage of pericardial abscess, placement of a pericardial drain & chest tube, esophagogastrojejunostomy & gastroesophageal stent placement x2

Removal of Migrated Stent & Small Bowel Obstruction Relief

July 23, 2022 - Bariatric Surgery

Diagnostic laparoscopy, enterotomy with enterorrhaphy and stent removal at distal ileum, proximal bowel dilation noted, esophagogastrojejunostomy, stable gastric ulcer with no active extravasation

Drainage of Pelvic Abscess

July 28, 2022 - Interventional Radiology

CT-guided pelvic abscess drained and removal of seropurulent malodorous fluid

Repair of Recurring Gastropericardial Fistula, Known Gastrogastric Fistula & Diaphragmatic Reconstruction

October 25, 2022 - Thoracic, Cardiothoracic, Plastic & Bariatric Surgery

Esophagogastrojejunostomy, mid-line re-laparotomy, takedown of gastropericardial fistula with gastric pouch resection, subtotal gastric remnant resection, Roux-Y esophagojejunostomy, partial small bowel resection, excisional debridement of myocardium & pericardium, partial diaphragm resection, reconstruction of diaphragmatic & pericardial defect with left pedicled rectus abdominus muscle flap, placement of 20Fr gastrostomy tube

Drain Placement

November 11, 2022 - Interventional Radiology

Ultrasound-guided left abdominal wall drain placement

DISCUSSION

- Few gastropericardial fistulas have been reported as a late complication of Roux-en-Y gastric bypass.
- This case illustrates the complexity in definitive management and follow up of a gastropericardial fistula as this patient had multiple complications and a recurrence since his initial surgery in June 2022.
- The prevention of marginal ulceration is imperative after Roux-en-Y gastric bypasses.

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