

Primary GI malignancy masquerading as intractable gallstone pancreatitis in a young adult

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Introductions

- Adolescent and young adult (AYA) cancers are defined as cancers that are diagnosed between ages 15-39 and are distinct from cancers diagnosed in younger and older patients based on differences in distribution of cancer types, tumor biology, survivorship, and risk of long-term effects¹.
- Adolescent and young adult gastrointestinal (GI) cancers are on the rise.
- The often insidious nature of GI malignancies plus the rarity of such diseases in this age group places these individuals at risk for delayed diagnosis, and ultimately greater number of persons-years of life lost compared to average-aged adults²⁻³.

Case Presentation

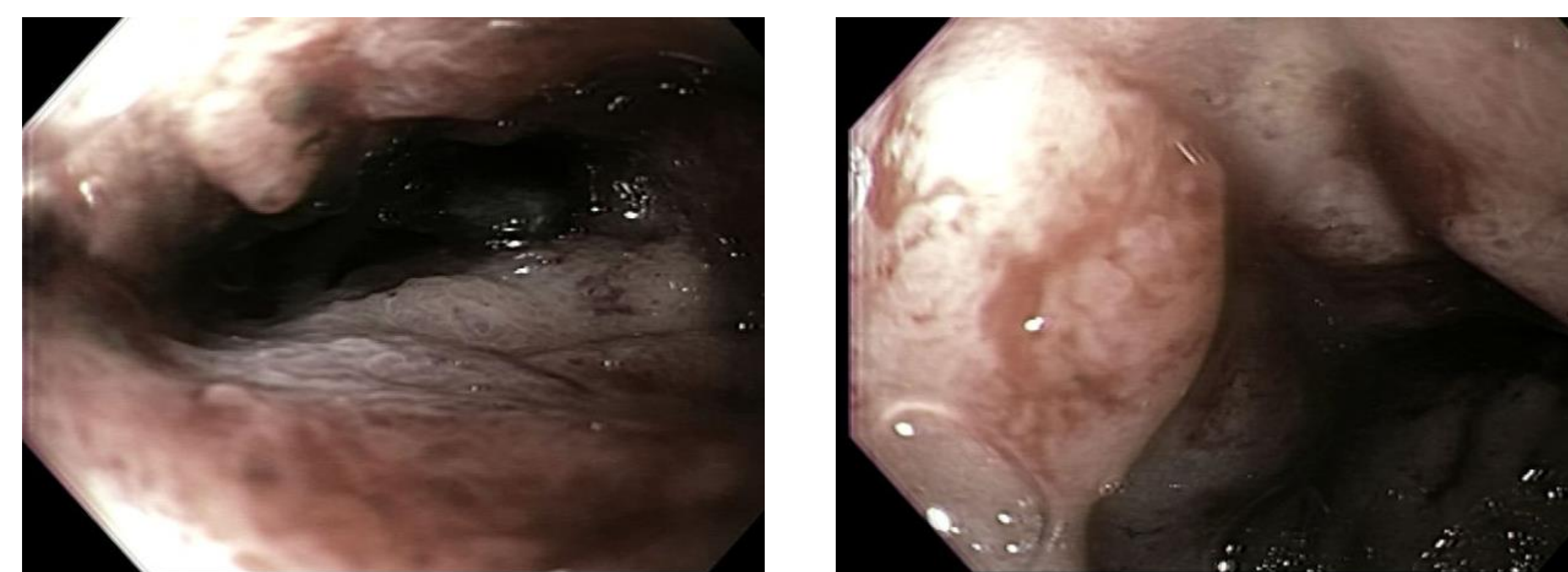
- 27-year-old male without significant past medical history developed **subacute progressive epigastric pain**, with outpatient CT abdomen/pelvis concerning for pancreatitis
- RUQ **ultrasound demonstrated many gallstones** with sludge and small amounts of ascites
- Labs in ED: AST 97 U/L, ALT 265 U/L, ALP 198 U/L, amylase 304 U/L, lipase 852 U/L, total bilirubin 3.5 mg/dL, and direct bilirubin 2.2 mg/dL
- Admitted to the hospital medicine, GI consulted for **gallstone pancreatitis with suspected choledocholithiasis**
- ERCP showed distal CBD stricture requiring stent placement
- Discharged home with GI and surgery follow-up
- Required **re-admission within 1 week** due to increased pain
- On retrospective chart review, was noted to have lost 17lbs over a 1-month period
- Re-admission labs: amylase 360 U/L, lipase 743 U/L, total bilirubin 2.1 mg/dL, AST 29 U/L, ALT 42 U/L, and ALP 149 U/L. Negative autoimmune and infectious hepatitis work-up. Also noted to progressive acute kidney injury.
- Repeat CT abdomen **without evidence of pancreatitis complications including rim-enhancing collection, hemorrhagic pancreatitis, or necrosis**
- MRI abdomen and MRCP negative for anatomic anomaly

Case Presentation (continued)

- Kidney biopsy revealed acute tubular necrosis and liver biopsy showed nonspecific findings without evidence of cirrhosis
- Repeat ERCP attempted; however, due to **severe duodenal edema, it was converted to EGD with duodenal biopsy**, which demonstrated **poorly differentiated adenocarcinoma of duodenal, biliary, or pancreatic origin**
- Over 3 month stay, course was complicated by protracted pancreatitis, acute renal failure requiring dialysis, severe malnutrition, and GI mucosal injury requiring transfusions
- Developed **multi-organ failure and septic shock** from bacterial peritonitis with paracentesis fluid cultures growing Klebsiella, Enterobacter, and Streptococcus ultimately leading to **acute encephalopathy with need for intubation for airway protection**
- Family opted for comfort measures; patient passed



Figure 1. Repeat CT abdomen/pelvis roughly one month into hospitalization demonstrating pancreatitis without any organized drainable fluid collection. CBD stent with unchanged position. Splenomegaly similar to prior studies. Several mildly dilated colonic loops without focal transition point, suggestive of colonic ileus.



Figures 2-3. EGD with friable, edematous mucosa in the duodenum with oozing seen, no focal source. The sweep is narrowed secondary to the edema.

Conclusions

- We demonstrate a rare case of primary GI adenocarcinoma in a young adult whereby the underlying diagnosis was masked by features of gallstone pancreatitis.
- Acute pancreatitis may be the first presenting sign of GI malignancy due to pancreatic ductal obstruction or focal necrosis secondary to tumor growth⁴⁻⁶.
- Tumor-associated pancreatitis should be considered when initial diagnostic workup for pancreatitis is unrevealing or if the clinical course is atypical.
- Timely recognition of tumor can lead to improved patient outcomes.

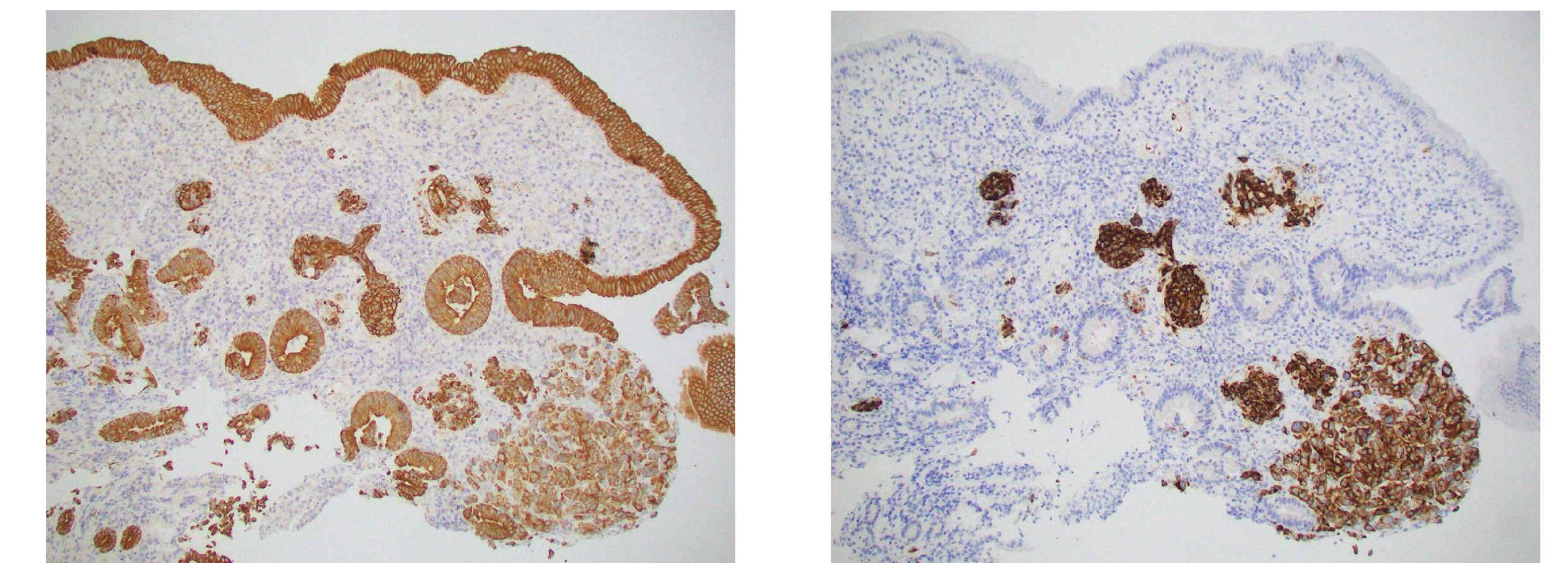


Figure 4-5. Immunohistochemical staining shows positive pancytokeratin expression in tumor cells, confirming the neoplasm as an adenocarcinoma. (100x magnification); Immunohistochemical staining demonstrates positive cytokeratin 7 expression in tumor cells, suggesting an upper gastrointestinal tract origin for the neoplasm. (100x magnification)

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