BIOMARKERS, IMAGING AND PAIN: AN INTERESTING OVERLAP OF DISEASE PRESENTATIONS

Abdul Aziz Siddiqui, MD; Nicholas Nassif, MD; Nadia Huq, MD

Aurora Healthcare, Milwaukee, WI

Introduction

- The association between acute pancreatitis and ulcerative colitis (UC) is described in literature, with a majority of pancreatitis in this patient population being drug-induced
- Endoscopic modalities offer a pathway to diagnosis and is a mainstay in differentiating inflammatory bowel disease (IBD) and associated conditions such as autoimmune pancreatitis
- In these situations, procedural approach to diagnosis should always be guided by clinical gestalt

Case Presentation

- A 20-year old male nursing student presented to his primary doctor with 1 month history of epigastric abdominal pain, constipation alternating with diarrhea, and occasional hematochezia
- Family history is significant for an older brother with idiopathic pancreatitis
- Initial work-up with pertinent findings in Table 1.

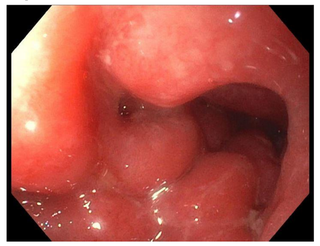
	Pertinent Laboratory Findings	
Measurement	Result	Normal Range
WBC (K/McL)	9.4	4.0 - 11.0
Hgb (g/dL)	13.7	13.0 - 17.0
Plt (K/mcL)	326	140 - 450
Total bilirubin (mg/dL)	0.4	0.2 - 1.0
AST/SGOT (Units/L)	19	<37
ALT/SGPT (Units/L)	33	<64
Alk Phosphatase	109	45 - 117
Fecal Leukocytes	Positive	Negative
Stool culture	Negative	
C. difficile Toxin PCR	Not Detected	Not Detected
Cryptosporium, Entamoeba histolytica, Giardia lamblia	Not Detected	Not Detected
Lipase (Units/L)	2,419	73 - 393

Table 1.

- He was then evaluated in the ED and found to have a normal lipase, CT abdomen/pelvis unrevealing for pancreatitis, but significant for mild sigmoid wall thickening

Case presentation, cont.

- He was discharged from the ED with opiates, anti-emetics, and a clear liquid diet for presumed pancreatitis
- Despite supportive measures, including outpatient IV fluids and pancreatic enzyme replacement, he continued to have epigastric abdominal pain, immediate postprandial diarrhea, and weight loss concerning for pancreatic insufficiency
- MRI of the abdomen was pursued and unrevealing of pancreatitis, however IgG 4 level was elevated and he was subsequently referred for endoscopic ultrasound (EUS) to rule out autoimmune pancreatitis



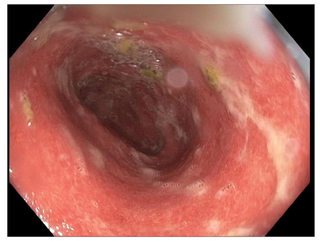


Figure 1 & 2.
Figure 1 demonstrating active duodenitis with peri-papillary involvement. Figure 2 demonstratir a severe ulceration and colitis of the sigmoid

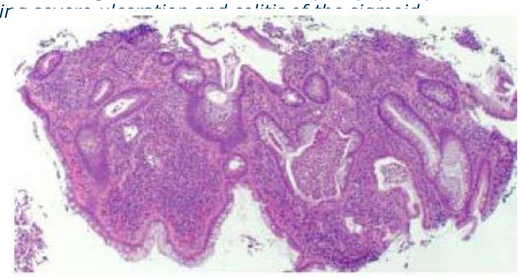


Figure 3.
H&E stain at low power (40 x) magnification showing chronic active colitis in the form of cryptitis and crypt abscess.

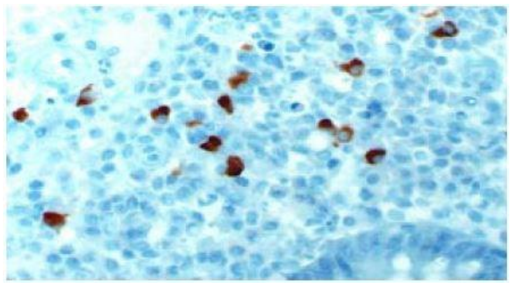


Figure 4.
IgG4 immunohistochemical stain at (400 x) magnification showing many plasma cells with cytoplasmic positivity.

Case Presentation, cont.

- Due to ongoing diarrhea and weight loss, he first underwent EGD and colonoscopy
- EGD findings: moderate to severe inflammatory changes in the stomach and duodenum including the papilla
  - Biopsy: chronic gastritis and duodenitis with lymphoplasmacytic inflammation within the lamina propria, immunohistochemistry for H pylori is negative
- Colonoscopy findings: diffuse inflammation and ulceration throughout the entire colon
  - Biopsy: active and chronic proctitis and colitis with cryptitis, occasional crypt abscesses and no identified granulomas
- The diagnosis was felt to be ulcerative colitis with contiguous extension into the upper GI tract due to the colonoscopy findings and histology
- Patient was initiated on prolonged prednisone taper, resulting in modest improvement of diarrhea and abdominal pain
- Maintenance therapy with infliximab and azathioprine was pursued resulting in clinical remission

Discussion

- This case illustrates a patient with moderate to severe ulcerative colitis with upper GI tract involvement presenting as acute pancreatitis
- This patient's initial presentation was a red herring in determining the diagnosis
- While lipase elevation and abdominal pain is characteristic of pancreatitis, it may also be elevated in small bowel disease
- IgG 4 also has poor specificity for pancreatic disease, and elevation without other evidence of pancreatitis may suggest another underlying condition such as IBD

REFERENCES

Alghamdi, S., Barkin, J., Trotter, M., Sorrentino, D., & Martinez, A. E. (2012, December 21). IgG4-positive Plasma Cell Infiltration in the Setting of Ulcerative Colitis. Journal of Gastroenterology and Hepatology Research, 1(11).