A Perf-ect Diagnosis: Ileocolonic Crohn Disease Presenting As Acute Appendicitis

Matthew J. Sullivan DO
Lehigh Valley Health Network, Matthew.Sullivan@lvhn.org

Michael C. Engels MD
Lehigh Valley Health Network, Michael.Engels@lvhn.org

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A Perf-ect Diagnosis: Ileocolonic Crohn Disease Presenting as Acute Appendicitis

Matthew J. Sullivan, DO and Michael C. Engels, MD

Division of Gastroenterology and Hepatology, Department of Internal Medicine, Lehigh Valley Health Network, Allentown, Pa.

BACKGROUND

- Crohn disease (CD) is a chronic inflammatory bowel disorder characterized by transmural inflammation and non-caseating small granulomas which may involve all parts of the gastrointestinal tract[1]
- CD involving the appendix is rare[1]
- Appendiceal CD often presents as lower abdominal pain which can mimic acute appendicitis[1]
- Incidence ranges from 0.2-0.62% of all appendectomies[2] with a retrospective review from 2014 citing an overall incidence of CD diagnosed at the time of appendectomy for suspected acute appendicitis to be 0.55%[1]

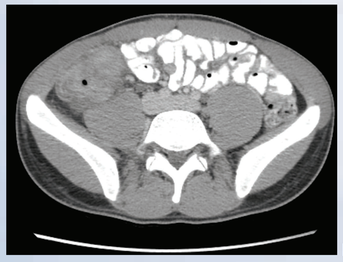

Image 1

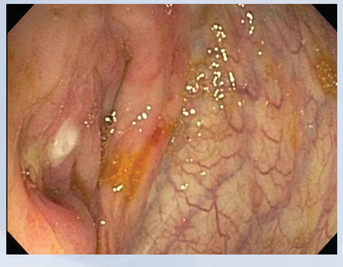

Image 2

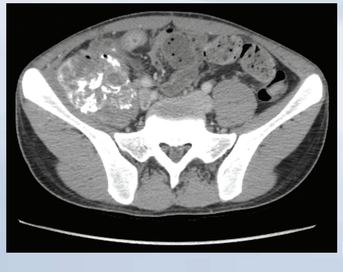

Image 6

CASE PRESENTATION

18 year old male without known past medical history presented to the hospital with intermittent right lower quadrant abdominal pain which was worsening over 3 weeks

- CT demonstrated acute appendicitis with possible early perforation
- Treated non-operatively with antibiotics

WEEK TWO

- Follow up CT scan 16 days later demonstrated bowel wall thickening of the distal ileum, proximal right colon, and appendix (Image 1)
- Admitted to 5-6 loose bowel movements per day at baseline prior to surgery
- Referred to GI for suspicion of Crohn disease

MONTH TWO

- Hospitalized with abdominal pain and fever
- Repeat CT scan with persistent inflammatory changes
- Work up for suspected Crohn disease ordered – see table 1
- Colonoscopy demonstrated a narrowed cecal lumen with ulceration and inflammation around the appendiceal orifice (Image 2) and an edematous ileocecal valve – ileal and cecal biopsies were obtained (Images 3-5)

MONTH FOUR

- Complained of right groin pain and fever at follow up GI visit
- MRE demonstrated a 8.0 x 6.1 x 2.2 cm right lower quadrant collection involving the right iliopsoas and iliacus consistent with psoas abscess (Image 6)
- Readmitted to the hospital for percutaneous drainage

MONTH FIVE

- Underwent open ileocecectomy with primary anastomosis
- Pathology demonstrated active Crohn disease with stricture, fistula formation (Image 7), and involvement of adjacent mesentery and appendix with abscess formation

PRESENT DAY

- Feeling well without symptoms
- Hesitant to start anti-TNF and opted for a repeat colonoscopy timed for 6 months after his surgery
- Requested a second opinion on management

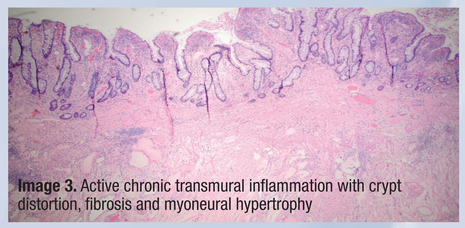

Image 3. Active chronic transmural inflammation with crypt distortion, fibrosis and myoneural hypertrophy

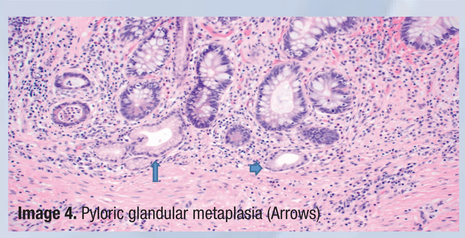

Image 4. Pyloric glandular metaplasia (Arrows)

Image 5. Transmural active chronic inflammation with bowel wall thickening and distortion

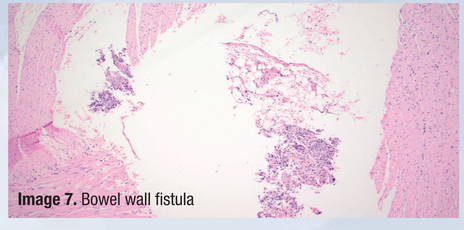

Image 7. Bowel wall fistula

Table 1. Labs at time of hospitalization in Month Two

Hemoglobin	11.7 g/dL
Albumin	3.1 g/dL
ESR	35 mm/hr
CRP	61.5 mg/L
Fecal Calprotectin	212 µg/g
ANCAs	Negative
ASCA IgG & IgM	25 & 23 (ref. 0-24.9)

DISCUSSION

- Overall incidence of CD involving the appendix is low, but isolated appendiceal CD is even more rare with less than 230 cases reported in the literature as of 2015[2]
- Prognosis for isolated appendiceal CD appears to be better than more diffuse disease with involvement of the appendix[1]
- Appendectomy is the treatment of choice for isolated appendiceal CD[1] with a reported recurrence rate of only 0-10%[2]
- Appendectomy alone in patients with unsuspected CD with involvement of the appendix has a high rate of fistula formation[3] as seen in our patient
- There is conflicting opinions in the literature regarding risk of developing CD following appendectomy, however this is felt to largely be secondary to diagnostic bias[4,5]
- Overall, this case highlights the importance of keeping an initial broad differential, taking an adequate history, and having a high index of suspicion when working up a case of suspected appendicitis with atypical symptoms and/or a prolonged course[1,3]

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