The Great Mimicker Gets Caught! A Rare Case of Syphilis in the Gastrointestinal Tract

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Introduction

Syphilis is a sexually transmitted disease that impacts a vast number of organ systems and may present in different clinical settings.

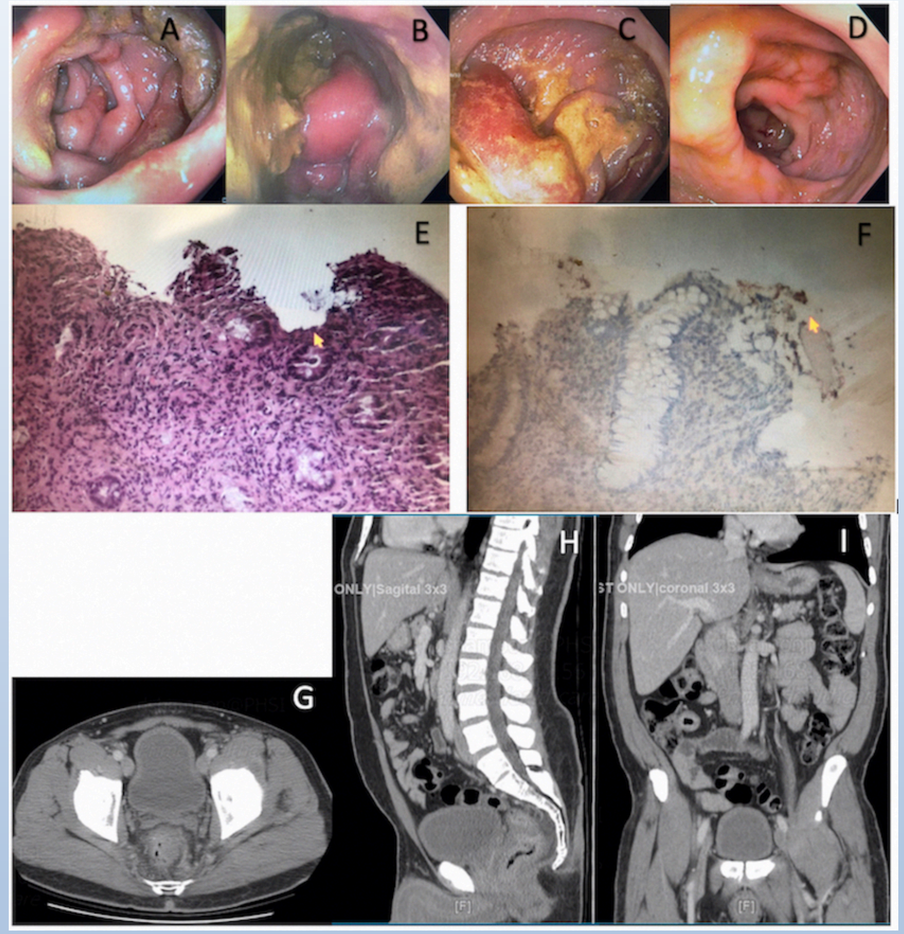
It can mimic various diseases leading to misdiagnosis and incorrect treatment.

It is important to properly diagnose syphilis in special populations that are at high risk of contraction.

Case Discussion

A 49-year-old transgender female with diabetes mellitus and hyperlipidemia presented to the emergency department with dull abdominal pain in the left upper and lower quadrants for 2 days.

- She had non-bloody, nonbilious emesis, 10-pound weight loss over 1 month, and constipation for 2 weeks.
- Laboratory results showed a cholestatic pattern with elevated CA 19-9 and equivocal AMA (Table 1).
- Computed tomography (CT) of the abdomen and pelvis showed hepatic steatosis, normal caliber of the biliary system, rectal wall thickening, multiple enlarged perirectal adenopathy, and mild inflammatory infiltration around the rectum suggesting superimposed proctitis (Images G,H,I).
- Magnetic resonance cholangiopancreatography was normal.
- First colonoscopy showed possible rectal mass or severe proctitis with near complete obstruction unable to be traversed (Images A,B,C).
- Initial pathology said possible lymphoma or a rare type of colitis (Image E). Patient was empirically started on ceftriaxone and doxycycline.
- A second colonoscopy, 4 days later, was successfully completed and inflammation improved (Image D). Chlamydia and gonorrhea were negative, RPR weakly positive, and FTA was positive.
- Special stains requested were positive for Treponema pallidum and negative for HH8 confirming the diagnosis of syphilitic proctitis and highly suggestive syphilitic hepatitis (Image F).
- Prior to discharge, liver function tests (LFTs) were significantly reduced.
- The patient received 1-month course of doxycycline.



Images A/B/C: Colonoscopy images showing inflammation, erythema and thickened rectal folds prior to initiation of syphilis treatment.
Image D: Colonoscopy image showing resolution of colitis post-treatment of syphilis.
Image E: Showing inflammatory changes of the rectum consistent with colitis.
Image F: Staining positive for syphilis of rectum biopsy.
Images G/H/I: CT abdomen and pelvis showing hepatic steatosis with normal caliber of the biliary system, focal moderate wall thickening of the rectum, multiple enlarged perirectal adenopathy concerning for rectal mass or carcinoma, and mild inflammatory infiltration around the rectum suggesting superimposed proctitis.

Table 1: Laboratory Values

Blood Chemistry	Value	Reference Range
Sodium	129	136 - 145 mmol/L
Chloride	94	90 - 110 mmol/L
Aspartate Transaminase (AST)	397	10 - 36 U/L
Alanine Transaminase (ALT)	224	6 - 46 U/L
Alkaline Phosphatase (ALP)	889	33 - 130 U/L
Total Bilirubin	5.7	0.2-1.2 mg/dL
Albumin	3.1	3.6 - 5.1 g/dL
Gamma GT (GGT)	1170	3 - 85 U/L
White blood cell (WBC)	6.60	4.40 - 11.0 10*3/uL
Hemoglobin	15.1	13.5 - 17.5 g/dL
Hematocrit	44.7	38.8 - 50.0%
Platelets	350	150 - 450 10*3/uL
Actin Smooth Muscle Antibody (ASMA)	15	0 - 19 units
Anti-Mitochondrial Antibody (AMA)	23.7	Negative: 0.0 - 20 units Equivocal: 20.1 - 24.9 units Positive: >24.9 units

Anti-Nuclear Antibody (ANA)	Negative	Negative
Immunoglobuin (IgG)	1220	767 - 1590 mg/dL
Perinuclear (p-ANCA)	< 1:20	Negative: < 1:20
Carbohydrate Antigen 19-9 (CA19-9)	125.2	0.0 - 34.0 U/mL
Carcinoembryonic Antigen (CEA)	3.0	0.0 - 3.0 ng/mL
Rapid Plasma Reagin (RPR)	Reactive	Non-reactive
RPR titer	1:4	None
Hepatitis A Total Antibody	Reactive	Non-reactive
Hepatitis A IgM Antibody	Non-reactive	Non-reactive
Hepatitis B Surface Antigen	Non-reactive	Non-reactive, equivocal
Hepatitis B Core IgM	Non-reactive	Non-reactive
Hepatitis B Surface Antibody	Reactive	Non-reactive
Hepatitis C Antibody	Non-reactive	Non-reactive
HIV 1/2 Antibody	Non-reactive	Non-reactive

Discussion

Syphilis is the cause of sexually transmitted proctitis in only 1% of men that have sex with men and transgender females.

Few cases of syphilitic proctitis imitating rectal malignancy have been reported.

Syphilitic hepatitis presents with intrahepatic cholestatic pattern with normal biliary tract imaging.

AMA may be positive prior to treatment.

Diagnosis requires abnormal LFTs, serological evidence of syphilis, exclusion of other diseases and normalization of LFTs after treatment.

Tissue diagnosis is not required.

Syphilis commonly mimics severe pathologies and requires exclusion as well as confirmation of spirochetes for high-risk populations with special staining.

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