Case History

67 y/o white man with chronic lymphocytic leukemia presented with chronic progressive severe non-bloody diarrhea and 20 pound weight loss.

Seven months prior to presentation, the patient had been hospitalized with E. feacalis Aortic valve endocarditis necessitating aortic valve replacement. He was treated with a prolonged course of ampicillin and . gentamicin. His course at the time was complicated by C. difficile colitis, which was treated successfully.

Four months prior to presentation, the patient noted onset of severe non-bloody diarrhea, with 6-7 watery non-foul smelling stools per day. He did not note any relation to diet. He did describe associated cramping mid-epigastric abdominal pain with associated anorexia, aggravated by all oral intake.

One month prior to presentation, the patient was admitted with disseminated varicella zoster infection. At that time, his diarrhea was treated empirically with a fourteen day course of oral vancomycin and metronidazole with no improvement. During the following 3-4 weeks, the patient attempted to remove gluten, dairy, and sugars from his diet. He also stopped the majority of his chronic medications. This had no effect on his diarrhea, and he presented to his primary care physician's office with continued symptoms and mild dehydration. He was admitted for further workup.

Past Medical History:

- Chronic lymphocytic leukemia status post treatment with Rituximab, currently on intravenous immunoglobulin
- Enterococcus feacalis endocarditis
- Hypertension
- Hyperlipidemia
- Gastroesophageal Reflux Disease
- Allergic Rhinitis
- Traumatic injury 11 months prior: fracture of clavicle, humerus, ribs

Past Surgical History:

- Minimally invasive aortic valve replacement
- Excisional biopsy of right groin lymph node
- Open reduction and internal fixation of humeral and clavicular fractures

Family History:

- No history of malignancy, inflammatory bowel disease, autoimmune diseases, malabsorptive diseases, or chronic diarrhea.

Social History:

- Lives in Mechanicsville, Virginia
- Does not have pets. Has not travelled recently.
- Retired from construction business
- No history of alcohol, tobacco, or drugs

Medications:

- Albuterol inhaler PRN
- Carvedilol 6.25 mg twice a day (stopped 2 weeks prior to admission)
- Plavix 75 mg daily
- Aspirin 81 mg daily
- Hydromorphone 4 mg as needed for pain
- Loratadine 10 mg PO daily (stopped 2 weeks prior to admission)
- MS Contin 30 mg twice a day
- Potassium Chloride 20 mEq daily
- Psyllium Powder
- IVIG 400 mg/kg every four weeks

Allergies:

- Percocet, codeine, tramadol (N/V)
- Cholestyramine (vomiting)

Physical Exam

Vital Signs**:** BP 114/74, HR 71/min, RR 16/min, Temp 36.7 °C, Pox 100% on RA, Weight: 65.6 kg, Height: 177.8 cm

General: Awake, ill appearing but not toxic, pleasant.

HEENT: PERRL, anicteric sclera, dry oral mucous membranes, with pale conjunctivae.

Neck: Supple, no carotid bruits, no JVD

Lymph: No cervical, subclavicular, axillary, or inguinal lymphadenopathy palpable

CV: Regular rhythm, constant S1/S2; mechanical S2, no murmurs/rubs/gallops were appreciated. PMI non-displaced,

Lungs: Full and symmetric excursion, clear to auscultation bilaterally

Abdomen: Soft, nontender, nondistended, normoactive bowel sounds. Splenomegaly (2 cm below left costovertebral angle.)

Ext: No edema, 2+ pulses bilaterally, diffuse muscle wasting

Neuro: CN II-XII intact, alert and orientedx4, 4+/5 muscle strength in UE/LE with DTR 2+ at patella and ankle B/L

Skin: Multiple healing vesicles on trunk and extremities

Laboratory Data and Imaging

Sodium 137 mmol/L, Potassium 3.9 mmol/L, Chloride 110 mmol/L, Bicarbonate 19 mmol/L, BUN 9 mg/dL, Cr 1.34 mg/dL, Glucose 84 mg/dL, Calcium 8.8 mg/dL

AST 39 units/L, ALT 82 units0.1 mg/dL, Albumin 3.5 gm/dL

WBC 36.3 x10^9/L , Hemoglobin 14.1 g/dL, Mean Corpuscular Volume 89.0 fL, Platelets 147 x 10^9/L
Peripheral smear: Predominately lymphocytes with smudge cells

PT: 10.8, PTT: 28, INR: 1.1 TSH: 1.9 uIU/mL Vitamin B12: 1225 pg/mL ESR: 7 mm in 1 hr CRP: <0.3 mg/dL LDH: 154 units/L Lactate: 1.0 mg/dL Lipase: 191 units/L Amylase: 33 units/L HIV 1 and 2 antibodies: Negative Serum CMV: Negative by PCR CMV IgG antibody: Positive CMV IgM antibody: Negative Endomysial IgA: negative AntiHuman TTG: <0.1 units Copper: 97 mcg/dL Zinc: 93 mcg/dL Gastrin: < 10 pg/mL VIP: 24.1 pg/mL	Stool studies: Fecal blood: Negative Fecal Lactoferrin: positive Osm 281 mOsm/kg Fecal Na: 79 mmol/L Fecal K: 24.8 mmol/L Fecal Cl: 66 mmol/L Ova and Parasites: None detected C. diff DNA PCR: negative Cultures: Negative for Yersinia, Campylobacter, Salmonella, Shigella, and Vibrio species. UA/Urine culture: Negative Blood cultures: no growth Fungus cultures: no growth

EGD/Sigmoidoscopy: Performed at prior admission showed chronic esophagitis and no evidence of celiac disease with sigmoidoscopy revealing essentially normal mucosa.

Chest radiograph: Median sternotomy, a heart valve replacement, chronic prominence of the central pulmonary arteries, old healed right lateral rib fracture, a right midclavicular fracture treated with a side plate and screws, post traumatic deformity of the right scapula, and a right humeral IM rod are noted in prior chest x-rays and are stable. There was no pneumonia or edema.

Abdominal series: Three views of the abdomen shows right lower quadrant surgical sutures, minimally dilated small bowel in left upper quadrant consistent with a minimal ileus pattern, and no bowel obstruction or free air.

CT Abdomen w/ Contrast:
The liver is normal in attenuation. No focal hepatic lesions identified. There is cholelithiasis without evidence of cholecystitis. The spleen is enlarged, unchanged. The pancreas images normally. No focal adrenal lesion is identified. The kidneys are normal in size and position. There are no dilated loops of bowel. No focal bowel lesion is identified. The terminal ileum is normal in appearance. There is no intraperitoneal free air or fluid collection. The abdominal aorta is normal in caliber. Numerous enlarged abdominal and retroperitoneal lymph nodes, unchanged in size. There are numerous subcentimeter nodes throughout the mesentery which are grossly unchanged. There are multiple prominent periaortic and aortocaval nodes which are stable in size. No suspicious osseous lytic or blastic lesions are identified.

A definitive test was performed that revealed the diagnosis.

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