11/01/23 Morning Report with @CPSolvers

***"One life, so many dreams" Case Presenter**: Mark (@Mark_Heslin)* ***Case Discussants**:Stephanie (@StephVSherman) and Zaven (@sargsyanz)*

CC: 33 yo F presents with 3 months of watery diarrhea

HPI: The sx never happened bf. It happened 1w after she returned from Mali Africa. Initially it was 10 episodes per day without blood, not related to food, happened all nights, and disturbed her sleep. In the past several weeks it gradually became 4-5 watery bowel movements daily. She endorsed weight loss around 20 pound and possible fever though she didn't record the temperature. Denies night sweats but endorses diffuse myalgia.

PMH: no

Meds: none

No surgery

Fam Hx: No family history of malignancy and GI conditions

Soc Hx: Born in Mali, came to the US 10 years ago, lives in Ohio and Pennsylvania, monogamous, no pet

Health-Related Behaviors: Non-smoker, non-drinker

Allergies: none

Vitals: T: aferial **HR:** 85 **BP:**122/77 **RR:** 20 **SpO2:**100%@RA

Gen: ill appearing, no acute distress

CV: nl, no murmur

Pulm: clear breath sound

Abd: slightly distended, mild diffuse tenderness more in the lower abdomen

Extremities/skin: no rash

Notable Labs & Imaging:

Hematology:

WBC: 26.5k lymphocyte dominant (21.9k) Hgb:12.9 Plt: 355 absolute eos: 240

Chemistry:

Na: 139 K: 3.2 Cl: 104 CO2: 27 (nl anion gap) BUN: 3 Cr:0.66 (no recorded baseline) ESR 4

AST: 47 ALT: 87 Alk-P: 82 T-bili 0.5 PT/INR: wnl Albumin: nl

HIV neg, hepatitis neg

Stool general pathogen study: neg, c.diff neg, parasite ova neg

TSH nl, LDH 360, ANA neg, Anti-smooth muscle Ab neg, celiac: neg, CRP non reactive

Blood smear: Atypical lymphocyte

CMV and EBV neg

Peripheral lymphocyte flow cytometry: abnormal T cell group (CD4, CD3 and CD25 +)

Human T-lymphotropic virus antibody positive

Imaging:

CT abd: thickening and edema of ascending colon, consisting of colitis with enlarged mesenteric lymph nodes around 1.2 cm

Colonoscopy: erythema in terminal ileum biopsy pathology suggested strongylosis

Dx: HTLV and strongylosis infection

Problem Representation: 33 yoF w/o PMH presenting w/ chronic non-bloody diarrhea, lymphocytosis and atypical lymphocytes in blood smear after returning from a trip to Africa

Teaching Points (Bettina):

- **Acute diarrhea:** usually infectious
  - Traveler's diarrhea is usually acute and due to viral causes or bacteria that cause acute colitis (toxigenic *E. coli, Salmonella, Shigella, Campylobacter)*
- **Chronic diarrhea:** inflammatory vs. non-inflammatory; secretory (infectious, neoplastic) vs. osmotic (increased volume, increased liquidness); malabsorptive
  - Volume, temporal pattern, food intake (e.g., sorbitol), hx of malabsorption, PMH, meds, associated s/sx that can point to systemic causes (e.g., wt loss, fever, myalgia), travel hx, immunosuppression (e.g., HIV)
  - If osmotic, usually occurs when patient is awake (i.e., ingesting)
  - If secretory, constant secretion (even while fasting, at night)
  - Giardia, cyclospora, some species of *E. coli*, cryptosporidium, helminths
- In patients with **diarrhea + weight loss**, consider malabsorptive vs. systemic inflammatory cause
- **Lymphocytosis**: primary (e.g., CML) vs. reactive
  - Viral in HIV-positive (CMV), chronic parasitic infections (toxo), TB (ileal)
  - Consider small bowel lymphoma, mucosal-associated lymphoma
  - Lymphoproliferative process can also lead to immunosuppression that increases risk for infection
  - **Atypical lymphocytes:** Larger and more irregularly-shaped with more cytoplasm
    - Infectious mononucleosis syndromes (EBV, CMV, HIV, toxo), neoplastic
    - Primary enteric involvement not usual in mononucleosis syndromes
- For non-bacteriologic causes, stool samples are often negative; investigation can include flow cytometry, imaging (LNs, bowel thickening), endoscopic evaluation, histopathology
- Patients with relative eosinophilia (200-400) may have increased risk for parasitic infections
- HTLV may have tropism for CD4 cells (immune systems similar to HIV) that increases risk for PCP, Strongyloides.