4/8/26 Morning Report with @CPSolvers

"One life, so many dreams" ***Case Presenter****: Mengyu (@zhoumy07)* ***Case Discussants****: (Andrew @ASanchez_PS & Kirtan @KirtanPatolia)*

https://clinicalproblemsolving.com/present-a-case/

Scribing (Ram)

CC:54M sent from urgent care for leukocytosis

HPI:

OP 1 week ago - URI symptoms, worsening cough/wheezing, CXR wnl, Rx - prednisone - asthma

A few days later, back pain - 4 years history, worsened over the last week. **WBC 13->18**, so patient was sent to the ED.

Fever (to 102F) 3 days ago, not currently

Nausea w/o vomiting, **abdominal tenderness**

H/o chronic intermittent diarrhea w cramps + blood (pt attributes to hemorrhoids); endorses chronic cough.

ROS: Denies chest pain, shortness of breath, urinary sx. No rash, joint pain.

ED vitals afebrile, HR 120 -> 90s with IVF and pain control; BMP, LFTs - wnl

Prior hospitalization 4 years ago (Recent travel to Philippines during this time) - E.coli bacteremia and empyema - 50 lb weight loss, chronic diarrhea (bloody stools and abdominal cramping, fecal calprotectin 3000s, infectious diarrhea workup (-). Celiac disease (-). OP colonoscopy/EGD - 3 polyps internal hemorrhoids; normal mucosa.

No F/U - no insurance - Occasional telehealth use

PMH:
Asthma, HLD

Meds:
inhalers, gabapentin

Fam Hx: adopted

Social Hx: No smoking, illicit drug use, recent alcohol, engine repair; No animal exposure, sick contacts, no known h/o TB

Health-Related Behaviors:
alcohol use disorder in remission

Vitals: T: 37.1 **HR**:103 **BP**:150/90 **RR**:18 **Sat**:97% RA

Exam: Gen: no acute distress, uncomfortable, does not want to stand/sit up

HEENT: no icterus, no lymphadenopathy, oral thrush

CV: nl **Pulm**: occasional wheezing, no crackles

Abd: soft, **diffusely tender esp LUQ, spleen 3 cm below costal margin**

Neuro: A&Ox4, nl **Extremities/skin**: + lower back tenderness

Notable Labs & Imaging:

Hematology:

WBC: **20 (N:95%)** Hgb: 12.8 Plt:250; Coag profile - wnl; Blood smear: (-)

Chemistry:

Na:131 K: 4.2 Cr:0.83 BUN:19 ; AST:12 ALT:19 Alk-P: 126 Bili:0.7

Albumin:3.6 Total Protein:5.8(low) RVP+ rhinovirus; prior - HIV, RPR negative. Quantiferon TB indeterminate. **BCx: *salmonella sp.*** prior labs: **IgA, IgG, IgM - Low**; tissue transglutaminase, gliadin IgG - (-)

Imaging:

CXR: mild atelectasis

CT abdomen/pelvis with IV contrast: no acute changes; **liver 21cm (nl 15cm)**, fatty liver; **spleen - homogenous enhancement** - 4/10 yrs prior

20 years prior - Salmonella infantis in his stool; ID - Rx Ceftriaxone.

H/o multiple episodes of PNA, otitis media

MRI full-spine WWO contrast: degenerative changes.

CT chest WO contrast: **RLL pneumonia**; no concern for aortitis.

EGD biopsy prior - **mild villous blunting and intra-epithelial lymphocytes**

Flow cytometry **- Absent B cells**, normal T cells; T-cell - 800, CD4 - 226; double negative T cells - normal;

Genetic testing - (-) for BTK, **pathogenic variant of PIK3R1 (+)**

PET CT - unremarkable

Dx: Activated PI3K delta syndrome

Problem Representation: Middle-aged patient with recurrent sinopulmonary infections and chronic diarrhea, currently presenting with leukocytosis hepatosplenomegaly and acute Salmonella infection, ultimately found to have pathogenic variant of PIK3R1 suggestive of activated PI3K delta syndrome

Teaching Points (Hans)

Leukocytosis: isolated?. Look at differential, consisten?.Reactive vs primary. Symptoms listed require to distinguish noise from signal. Infectious vs inflammatory autoimmune.

E.coli:food poisoning(outside) inside mucosal breach,(cancer, anatomic anomaly,strongyloidosis) self infection UTI, IV drug abuse,

Hepatosplenomegaly:Cells(infiltrative->myloproliferation,lymphoma infection eg granulamatous), molecules(fatty liver), water(portal HTN,thrombosis, AOS,endocarditis),

BCX:salmonella: immunostatus, source?
Low immunoglobulins: CVID (Ig G undetectable humoral dysregulation CVID enteropathy, lymphocytosis, lymphoma, ILD often as granulomatous -lymphocytic interstitial lung disease). ALPS mimicer of CVID but normal Ig.

Absent B cells low immunoglobulis: XLA (X-linked agammaglobulinemia) or Bruton's agammaglobulinemia.

Activated PI3K delta syndrome
Autonomic dominant mutation of PIK3CD or PIK3R1 gain of function in the PI3K delta pathway.
TX; lenisolib