06/11/24 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: UTSA Dr. Ian Mines (@uthsaim) Case Discussants: Ravi (@rav7ks) and Yaz (@minheredia)

CC: 55 M left sided abdominal pain

HPI: Stared 3 weeks prior when in vacation at Mexico; did not go outside; drank bottled water and didn't eat street food. 3 days after returning - increased fatigue, abdominal pain, left sided chest pain, left lower rib pain. Went to outside hospital and was treated for pneumonia with amoxicillin and ibuprofen; no improvement. Eyes started getting yellow and complained of night sweats that were getting more frequently. 20 pound weight loss since 1 month, but mentions change in diet. Denied fever, nausea, chills, bowel and bladder movement.

PMH:
HTN
BPH
PTSD
Chronic low back pain
Cholecystectomy
Exploratory laparotomy for splenic laceration (1980s)

Meds:
Amlodipine
HCTZ
Valsartan
Ibuprofen
Tamsulosin

Fam Hx: Unremarkable

Soc Hx: Works office job. Lives with wife. Grown children

Health-Related Behaviors:
Sexually monogamous. Doesn't smoke, drink or use substances

Allergies: None

Vitals: T 97.8ºF, **BP** 133/84, **HR** 76, **RR** 18, **SpO2** 100% RA, **BMI** 32

Exam:
Gen: No acute distress **HEENT:** Mild scleral icterus
CV: Normal **Pulm:** Normal ; Pain with rapid inhalation
Abd: Soft non tender, complained of pain in LUQ on deep inspiration, palpable spleen
Neuro: No focal neurological deficits **Extremities/skin:** Normal

Notable Labs & Imaging:

Hematology:
WBC: 11.4 K (neutrophilic predominance) Hgb:11.3 Plt: 582, MCV 69.5

Chemistry:
Na 140, K 4.5, Cl 97, Bicarb 25, BUN 11, Cr 1.2, glucose 100, Ca 9.0
-AST 78, ALT 88, T. Bili 3.2; Prot 7.1, Alb 3.9, Alk Phos 279 -CRP 20 (normal <10), ESR- 58
Day 2 of admit, temp 101.4. No new localizing sx. Started vanc/pip-tazo/doxy.
-RVP negative, blood cx x2 negative; UA w/ 4 RBCF, 2 WBC, Urobilinogen 4.0; uCx negative, lactate normal
-HIV, HepA, HepB, HepC negative
-ferritin 1050, Tsat 14%, Retic 2%
-smear: 1% plasma cell, 2+ anisocytosis, 3+ poikilocytosis, 3+ target cells
-LDH 930, Haptoglobin <10, D-dimer 3901, Direct bili 1.8, PTT & INR wnl
TB quant, Monospot, EBV, CMV, Toxoplasmosis Ab all negative
-Urine histo Ag negative; serum beta-d-glucan, Cocci, Crypto, Aspergillus all negative
-Bartonella, Brucella, Leishmania, Leptospira, Coxiella testing all negative
-thick & thin smear negative for malaria, babesia & dengue testing negative
-SPEP w/o M-spike, sFLC wnl, flow cytometry negative for abnormal b-cell population, serum MPN panel negative
-Hb Electrophoresis showing HB C 43.6% (H), Hb S 51.2% (H), A2 4.5% (H), A 0, E 0, F 0.7%

Imaging:
-CT abd/pel: Liver, biliary tree, kidneys, bowel wnl. Marked splenomegaly (18.7cm) with heterogeneous hypoattenuation, thin peripheral calcifications, trace perisplenic fluid layering in the L paracolic gutter. Sclerosis in superior bilateral femoral heads suggestive of avascular necrosis.
-CT chest (Day 2): few, small calcified granulomas in b/l lungs, few mildly enlarged pericardial LNs
-MRI L-spine (was planned outpatient for chronic low back pain): Diffusely decreased T1 and T2 marrow signal. Nonspecific but raises concern for MPN (myeloproliferative neoplasia) vs extramedullary hematopoiesis vs benign or malignant marrow infiltration, and systemic/metabolic processes.

Dx: HbSC disease resulting in splenic infarct d/t high altitude travel

Problem Representation: 55y/o obese M w/ 3 month history of L sided abd pain, fatigue, L sided chest pain, weight loss and jaundice. Fever on hospitalization. PE reveals palpable spleen and pain of LUQ w/ deep inhalation. Neutrophilia, high bilirubin, ESR, ferritin and ALK-p, and microcytic anemia. Bilateral osteonecrosis of the femoral head, splenomegaly w/ calcification, b/l granulomas on chest. Target cells, anisopoikilocytosis on PS

Teaching Points (Parisa):

Jaundice →cholangitis; ALF; hemolysis → indirect (decrease hepatic uptake; bilirubin production; Impaired conjugation/ Hereditary → gilbert ; crigler-najjar) vs direct (intrahepatic vs extrahepatic; luminal; stricture; external)
Range of bilirubin→ Icteric sclera (2) ; Icteric skin (6)

Drug liver injury → Amoxicillin, acetaminophen→ Alp would be normal; ALP abnormal obstructive cause.
Rifampin (decrease hepatic uptake)
Palpable spleen → infiltration and hematological infection(malaria) ; hematological malignancy (infiltration/ extramedullary hematopoiesis)
Leukemia → bone; spleen (ALL younger, CLL/CML older)
Infection + splenomegaly → mono, tick borne, granulomatous
Spleen (organomegaly) + avascular necrosis → Storage disease (Gaucher dx) ; hemolytic anemia (low Hb)

Bilateral AVN → blood supply disrupted to bone tissue
Alkp elevation → Bone, liver, intestine, placenta, kidney
Microcytic anemia (TAILS) → Thalassemia; anemia of chronic dx; IDA; lead poisoning; sideroblastic anemia.
Hyperferritinemia → HLH(high number); Macrophage activating syndrome; cytokine storm; COVID; histoplasmosis; AOSD; hemochromatosis. → Triggers HLH → infection; malignancy

Granulomatosis Dx → Non inf (sarcoidosis) ; Inf (TB; histoplasmosis; coccidiomycosis)
Target Cells: HALT Hbc, Asplenia, Liver disease, Thalassemia

Retic count → hemolytic anemia (high); IDA/ aplastic anemia(low)