03/20/25 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: Gregory Kirschen(@) Case Discussants: Rabih (@rabihmgeha) and Sawsan(@)

Scribing (Johann)

CC: 29yo, 20 weeks gestation, presented with 5 days of fever, chills, body aches.

HPI:
Woke 5 days prior with aches, chills, night sweats, 102F. Took tylenol. Next day, rib/hip pain (R>L), stabbing right leg pain. Tylenol didn't help chills, dizziness, malaise, headaches, nausea, poor appetite, dehydration.

ROS: Denied vomiting, diarrhea, runny nose, cough, SOB, abdominal/chest pain, dysuria, discharge, contractions, bleeding.

PMH:
sickle cell-beta thalassemia. Recent admission for vaso-occlusive crisis (bilateral leg pain), negative AVN/VTE. Received 1U RBC transfusion, PCA, discharged on PRN oxycodone

Meds:
tylenol ATC, oxycodone 10mg q6, heat packs.

Fam Hx:
Non-contributory

Soc Hx:
No smoking/EtOH/recent travel

OB: 2 full term c-section

Vitals: T: 102 BP: RR: 16 HR: Sat: 98% on RA
Exam: Gen: not in acute distress
HEENT:Neck:CV:
Pulm: inspiratory wheezing
Neuro: AO x 3
MSK: ribs right 9 - 12 tender to palpation, BL swelling in lower extremities + tenderness (R>L)
Doptones: 140bpm

Notable Labs & Imaging:

Hematology:
WBC:2.7 (9.7% bands Hgb:7.1 Plt: 106 retic 0.8% absolute count 27
Chemistry
Na: 135 K: 3.1 Cr: 0.64 Ca: 7.5 Cl: 104 HCO3: 22 hapto: 102 **LDH**: 362
AST: 43 ALT: 11 ALP: Bili: 0.9 (0.6 direct) **Ferritin** > 1000 **Albumin:** 2.7
Pro bnp 991
Neg respiratory panel, blood culture neg x2, UA normal
Imaging:
CT: no PE, peripheral bronchial wall thickening, HSM
LE US: DVT negative Fetal MCA Doppler: severe fetal anemia
Further Management
She continued to spike twice daily fevers as high as 105F and required a dilaudid PCA for pain control. Empiric vanc, cefepime, azithromycin started.
Counseled on fetal anemia, opted for D&E. Post-D&E, fevers persisted, with AMS and vitreal hemorrhages.
Infectious: Neg EBV, CMV, HIV. Pos parvovirus IgG, neg IgM, PCR 364
Normal peripheral smear x2. Neg babesia, ehrlichia, anaplasma, toxo IgM. Neg Karius.
Immune: CXCL9 12961. Cytokines: INF-g 239, IL6 17.9, IL8 47.5, IL10 2.8, TNF-a 9.7 (all elevated). ESR 47, CRP 16.6. ANA 1:80, anti-dsDNA <10, others wnl.
WBC 3.9, Hb 6, platelets 23. Haptoglobin 78, LDH 487, ferritin 3065.
Retinal phlebitis on exam.
Head CT: no acute findings.
MRI: mildly decreased diffusion in the left periatrial region and left cerebellum. F/u few new small nonspecific FLAIR hyperintense foci within the left temporal white matter
prednisone 60mg daily, She remains in the hospital and has started to feel symptomatically improved. LP could not be done.
BM biopsy: megakaryocytic atypia and rare hemophagocytic histiocytes.
Dx HLH

Problem Representation:
29 y/o pregnant female with sickle cell disease p/w a an acute inflammatory syndrome with fever, body aches and HSM. Her labs revealed a hematologic fingerprint apparent by a pancytopenia, hyperferritinemia and an elevated LDH-levels.

Teaching Points (Julia):

I) Approach to **fever:** IMADE mnemonic: infection > others
host factors: i) pregnancy = immunosuppressive state → be aware of special bugs (i.e. intracellular organisms, Ib) pay attention to special locations: Uterus & draining veins

II) sickle cell disease make pt. vulnerable for transfusion complications and thus blood borne disease

III) Bilateral edema: lab (+) : Heart liver and kidney (BNP, Albumin, LFTs) if (**lab (-)** plus hematogenous / hypercoagulable disease → venostasis (IVC compression)

IV) radiographic (-) inflammation → a) blood based b) cytokine storm as a consequence of an area of focal infection (e.g. lung)

V) blood based disease: A culture (+) **macroscopic** vs **microscopic** (PCR, smear) ; RBCs (malaria, babesia); neutrophils (HGA , rickettsia, Anaplasmosis) monocyte: Human monocytic ehrlichiosis, bartonella quintana - work-up: BK, epidemiology

VI) hectic hematogenous syndrome (characterized by pancytopenia)
Common: Sepsis, liquid cancer, tick borne, lupus
Less common cause: HLH (ferritin, AST, CXCL9, fever): secondary >> primary
Time course !!

VII) Suspicion for **Parvovirus** perform a PCR , sens >> serology

VIII) Sickle cell -> Bone marrow necrosis / fat embolie can trigger HLH

IX fetus is another vital sign: OBG = wisdom