11/25/23 Morning Report with Northwell Health IM Residency Program & @CPSolvers

Case Presenter: *Shreya Srivastava (@ssShreya1)* ***Case Discussants***: *Kirtan (@KirtanPatolia) Ayesha (@AyeshaGhoto) and Sara (@sarazhous)*

CC: Altered mental status for 2 days in a 37 y/o F

HPI:
2 days of AMS. Recent admission for pneumonia - d/c'd 5d prior to this presentation. History of acinetobacter + blood cultures. 2d prior to presentation, still being treated w/ gentamicin/vancomycin

ROS: positive for AMS, confusion, full body rash (desquamative, no mucosal involvement), fevers for 2d

PMH:
ESRD on dialysis 2/2 preeclampsia
Catheter in place
Preeclampsia

Meds:
Gentamicin
Vancomycin
Labetalol
Nifedipine
Isosorbide dinitrate
NaHCO3

Fam Hx:
N/A

Health-Related Behaviors:
N/A

Allergies: none.

Vitals: T: 100.7 F **HR** :118 **BP:** 112-130/70 **RR:** 16 **SpO2:** 97
Exam: Gen: appeared uncomfortable
Pulm: wheezing and crackles bilaterally
Neuro: A&O x 1-2, waxing & waning.
Extremities/skin: R-IJ catheter. No notable purulence. Erythematous, desquamative skin without mucosal involvement.

Notable Labs & Imaging:
Hematology:
WBC: 2.26 **Hgb:** 8.1 **Plt:** 116
Prior admission: CBC: WBC 5-6, Hgb 8.1, Plt 200k

Chemistry:
Na: 130 **K:** 3.2 **Cl: 99 BUN: 39 Cr:** 5.86 **HCO3:** 13 **Mag:** 1.4 **Phos:** 4.8
AST: 551 **ALT:** 279 **Alk-P:** 228

LDH: 3259 **Hapto:** 184 **Uric acid:** 5 **Ferritin:** >100,000 **Triglycerides:** 620

RVP (incl Covid), hepatitis panel, HIV: negative
EBV: prior infection, not active. **CMV**: negative
Ehrlichia, babesia: negative
Repeat blood cultures: + acinetobacter, S. epidermidis
AFB: positive for mycobacteria

Imaging:
EKG: NSR **CXR:** normal **CT Head:** normal **CT chest:** bilateral GGOs
CT abdomen: retroperitoneal & pelvic adenopathy
Echocardiogram: normal

Hospital course: worsening dyspnea, tachypnea -> intubation. Non-responsive even off sedation; consulted neuro & imaging done. **MRI**: + PRES.
Lymph node biopsy: negative for malignancy. **BM biopsy**: + for HLH.

Dx: Hemophagocytic Lymphohistiocytosis 2/2 Mycobacterial infection

Problem Representation: 37 y/o female with 2 days of altered mental status, fevers and rash, and PMH of ESRD, presenting after recent admission for PNA & acinetobacter bacteremia. Labs reveal transaminitis, hyperferritinemia & hypertriglyceridemia. Found to have HLH 2/2 mycobacterial infection.

Teaching Points (Tansu):
AMS: MIN(S)T, Localization x Time course
Rash: infection 2/2 pneumonia? Or 2/2 to tx for pneumonia (beta-lactams)? //
SIRS-like picture 2/2 to infection, or drug used for tx?
Characteristics of the rash: maculopapular, petechnial, pruritic, involvement of mucosa (SJS-TEN) // Desquamative- TSS rash vs. DIHS. Usually w/ these etios: desquamation happens 1-2 weeks after the rash, here desquamation is right away. Endocarditis → IC deposition in the vasculature → Vasculitis type rash. Listen for a murmur.
Persistent blood cx: Wrong drug, resistant bug, inadequate source control, drug cannot penetrate the abscess in the lung 2/2 to PNE?
Transaminitis: Infections (bacterial, viral, tick borne (babesia, ehrlichia), drug mediated) → Keep in mind transformation to next stage (e.g. HLH)
Pancytopenia: Was Hgb higher before? Central (BM process) vs. peripheral (Next step: ESR, CRP; LDH, hapto, coombs, ferritin, PBS, USG to evaluate for splenic seq). // Low likelihood: TSS, DRH/DRESS (liver involvement, no pancytopenia). Time course against lymphoproliferative dz. Fungal- would not cause disseminated mp-rash. //
Hyper-ferritin, high LDH: fast cell turnover at BM/periphery, 2/2 MAS, … .
HLH W/U: EBV, CMV, Covid-19, atypical bacterial serology blood cultures, ehrlichia, babesia serologies, bacterial source eval w/ blood cx., triglycerides. HLH, sepsis → at risk of developing PRES.
Final DDX: GGOs → Pus filling the alveoli, systemic bacterial infs (legionella, steph, staph, acineto, listeria) vs. inhalation (atypical bugs-leptospirosis, yersinia, anthrax), hantavirus pulm. Syndrome. BAL for PJP. Urine histo, blasto.