06/14/21 Morning Report with @CPSolvers

Case Presenter: *Ann Marie Kumfer (@AnnKumfer)* ***Case Discussants***: *Stephen Madaras (@Styxxx44) and Liz Sain*

CC: fevers, diarrhea, emesis

HPI: 22M p/w subjective fevers, diarrhea and emesis. Fever that preceded GI Sx , present for 1 week. Diarrhea non bloody. Emesis dark w/o blood. Other Sx - malaise, dizziness, severe HA, backache, tinnitus, rash localized to the arms. Prior to presentation, pt seen at urgent care → told likely viral. Continued with persistent dizziness, blurred vision + prior Sx. Initially at outside hospital: acute renal failure, started on IV fluids, Metronidazole, ? transfer requested

PMH: G6PD deficiency Dx 5y ago

Meds: n/a

Fam Hx: n/a

Soc Hx: n/a

Health-Related Behaviors:

Currently sexually active with Men, no recent acounter
HIV test neg- 2 wk ago

Allergies: n/a

Vitals: **T**: 36.2 **HR**: 80 **BP**: 130/63 **RR**: 18 **SpO_2**: 96% on RA

Exam:

Gen: well appearing, NAD
HEENT: small inflamed lesion with crusted blood on lower lip, no ulcerations in lower pharynx, + palatal petechiae
CV: nl, no murmurs, no JVP
Pulm: crackles?
Abd: nl, liver and spleen normal size
Neuro: intact speech, alert symm face, hearing intact, no abnl movements, strength intact, no cerebellar signs
Extremities/Skin: no clubbing, synovitis. Skin with few pinpoint, follicular lesions in LLE

Notable Labs & Imaging:

Hematology:
WBC: 4.5 (ANC 1.9, abs lymph count 1) Hgb: 13.1→ 9.7→ 7 (prior 17) Plt: 112→ normalized (prior 50s) MCV 88 RI <2%

Chemistry:
Na: 135 K: 4.6 Cl: CO2: 22 BUN: 106 Cr: 11.45 AG: 14 glucose: 90 Ca: 8.6
Phos: 4.5 Mag: nl; AST: 126 ALT: 90 Alk-P: 43 T. Bili: 2.3
D. Bili: 1.8 Albumin: 2.7 TP: 5.5 ; INR 1.19, PT 13.9, CK 1400, CRP 80, Lactate 0.8
UA: SG 1.009, 16 RBCs, 30 mg/dL prot
D Dimer 903, Fibrinogen 519; LDH 5000, Hapto <20; Peripheral smear w/o schistocytes. Neg ANA, ANCA, C3- 50 (nl >88), C4 27 (nl); ADAMSTS13 35%; BCx- neg; RSV- neg, stool antigen- Neg
Urine microscopy - signs of ATN ; Bx: Acute diffuse tubular injury, IHC stain for Hgb neg, for pigment cast, no evidence of glomerulonephritis/ microangiopathy
B12- nl, Coombs normal. Repeat HIV: Positive, HIV viral load > 1M

Final Diagnosis: G6PD anemia 2/2 HIV infection

Problem Representation: 22M with pmh G6PD, part of MSM population, who p/w acute onset non-inflammatory diarrhea, and other systemic sx, f/t/h acute renal failure and newly positive HIV viral load.

Teaching Points (Gabi F Pucci):

- *Rationale to approach multiple symptoms: 2 options:*
  1)One single disease explains all
  2)Multiple diseases processes
  It's important to determine if the person is immunocompromised or not (if so, DDX will be expanded)
- Causes of multisystem clinical syndromes: vasculitis, disseminated infections (e.g. endocarditis)

3 main buckets for anemia:
- Blood loss: platelets are normal
- Destruction: thrombocytopenia, high reticulocytes
- Poor production: thrombocytopenia, low reticulocytes

Anemia + thrombocytopenia: think in MAHA (microangiopathic hemolytic anemia)! TTP or HUS or DIC
- **DIC:** (severe infection or severe malignancy in the body, clotting or bleeding). Check fibrinogen (low).

How to differentiate TTP from HUS? Both Neuro + Kidney
- **TTP:** neuro symptoms >>> renal failure. Acute HIV (window period). Check ADAMST13 levels (low).
- **HUS:** renal failure >>> neuro symptoms. Usually Shiga toxin mediated. Diarrhea followed by HUS. Extrarenal manifestations like GI and rhabdomyolysis is also common. Schistocytes present. Low C3 level.