02/13/25 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: Patricia(@) Case Discussants: Rabih(@), Maryana(@maryanamribeiro)

CC: 70 yr male with a Hgb of 4.5 presents to the ER.

HPI: Fatigue, confused speech, restlessness and sudden motor deficit in right upper limb for 1 week. Initial assessment showed elevated BP and Hgb of 4.5

ROS: (-) diarrhea, melena, hematochezia, nausea,vomiting or anorexia.

PMH:
Rheumatic arthralgia
No H/o DM or BP

Meds:

Fam Hx:

Soc Hx: Lives in Cameroon

Health-Related Behaviors: No alcohol or smoking history

Allergies:

Vitals: T: 39 C **BP:** 191/88 mm Hg **RR:** Normal **HR:** Tachy **Sat:** Normal
Exam: Gen: confused, fatigue
HEENT: Pink conjunctiva, jaundice
Neck: normal
CV: tachycardia, RRR
Pulm: normal
Abd: soft, non distended, diffuse tenderness, no masses, normal DRE
Neuro: motor deficit on right side, strength ⅘, sensation intact
MSK: petechiae on lower extremities and abdomen

Notable Labs & Imaging:

Hematology:
WBC: 21,000 N:700, L: 1000 Hgb: 4.5 Plt: 12,000 MCV: 87, Reticulocyte: elevated

Peripherals smear: malaria negative, schistocytes(+)

Chemistry
Na:143 K: 3.56 BUN: 23.46 Cr: 0.36 Cl: nl
AST: 34.6 ALT: 23.76 Total bili: 30.85 (conjugated 11.4) HbA1C:12%

Imaging:
Head CT: Ischemia in brainstem
Stabilized with BP meds, Blood transfusions.
Abd US: Homogenous Hepatosplenomegaly

Pt given high dose corticosteroids with slight improvement in confusion

Dx Thrombotic thrombocytopenic Purpura

Problem Representation: 70 yr M with 1 week of fatigue, confusion, motor deficit. Hb is 4.5, high grade fever, tachycardia, jaundice with thrombocytopenia and elevated retic count, bilirubin and presence of schistocytes on smear

Teaching Points(Rahul):

Acute Anemia: Bleeding(GI/GU) vs Hemolysis
Consider Acute bleeding until proven otherwise. as we are not clear of time course.
Time course: Acute vs chronic. If acute bleeding - there will code. But here, pt is presenting to the ER- telling us the patient is somewhat better and tells us subacute-chronic course
Next steps: Iron Profile. IDA, Chronic bleeding, Malabsorption.
MIST: Metabolic, infections, structural, toxin mediated.
Hemolysis: **Elevated bilirubin, high LDH, Low haptoglobin**. Chronic hemolysis: **high reticulocyte count.**
I am going to use anemia has a clue but consider neurological sx - hemorrhagic/ ischemic stroke to make any progress.
Is it bleeding within the brain causing anemia or Issue with the blood like clot - neurological issues.
Sudden motor deficit with confusion: ICH, focal large stroke with presence of small vascular occlusions. Evaluate for stroke with imaging.
HTN: Hypertensive emergency? Is this High BP causing hemolysis. Cause for high BP findings in pts without h/o HTN.
Could be the consequence of underlying: Pain/discomfort. Kidney disease(GN), Neurological(Ischemic/hemorrhagic stroke)
Acute HTN - Noise(catecholamine surge) . **Less commonly- vascular problem(GN)**
Fever: Infection(parasite with anemia)/ inflammation. CBC helps.
Fever with FND: Brain Abscess/ IE. Blood cultures. Van+ceftriaxone
Microscopic infections which don't grow on cultures: Malaria. **Thick and thin smear.**
MAHA: tiny thrombosis. TTP, DIC, APLS, malignancy- macro thrombosis- **peripheral smear would be helpful.**
Anemia + Thrombocytopenia - Central: Marrow issue. Peripheral: Vascular (MAHA), AIHA, Infections(malaria).
Discrepancy between leukocytosis with Neutropenia and Lymphopenia: what makes a unaccounted for? What are other diff? Given the Elevated Reti: I assume healthy marrow. Call Hematology and also indirect bilirubin and **Peripheral smear would be a great tool to achieve progress.**
Stroke: Pump(AF)/ pipe(atherosclerosis) / plasma(TTP/ Hypercoagulable)
TTP: Deficiency of ADAMTS13(antibody 90%) - preventing VWF multimers into monomers- triggers endothelial injury and consumes platelets - thrombocytopenia. Hemolysis occur due to RBC hitting with the microthrombosis. **Pentad is rare(fever/ neurological sx are last entity/ untreated TTP).**
Vast Majority: Thrombocytopenia Hemolysis Microthrombosis. Rx: Remove the antibody. **Plasma Exchange**. Give Corticosteroids. **How to confirm?** Improvement with PE. ADAMTS13 activity low(<10%). Next steps what conditions a/w TTP: **Lupus, HIV.**