2/10/26 Morning Report with @CPSolvers

"One life, so many dreams" ***Case Presenter****: Shriya (@shriya-upadhyaya)* ***Case Discussants****: Dr. Ravi (@rav7ks) & Kirtan(@KirtanPatolia)*

https://clinicalproblemsolving.com/present-a-case/

Scribing (Seeme)

CC: 44 y old M with history of orthostatic hypotension presents with worsening dizziness

HPI:

He said he felt more dizzy than usual, In the ED was found to be hypotensive and tachycardic

ROS:

No chest pain, SOB or any other symptoms. BP and HR after IV fluids changed to 110/90 and 90 respectively.

PMH:
DM2

Meds:
Metformin
Pioglitazone
Glipizide- started 3 days ago

Fam Hx:
-

Social Hx:
Works in army

Health-Related Behaviors:
No smoking, drinks socially

Allergies:
NKDA

Vitals: T: **HR**: 114 →90 **BP**:90/60→ 110/90 **RR**: 24
Exam: Gen: nl
HEENT: nl
CV: S1 S2 no murmur
Pulm: nl **Abd**: nl **Neuro**: nl **Extremities/skin**: nl

Notable Labs & Imaging:

Hematology:
WBC: 8k Hgb: 6.9 (10.9 1 week back) Plt: nl MCV:108.7
LDH:301. Haptoglobin:10 MCHC: 35 % iron panel: nl
reticulocytes: 20
PT:12, PTT: 40, INR:0.7 Vit B12: 600, folate:3.8
homocysteine/MMA: nl

Chemistry:
Cr: 1.2 fasting Glucose: 216 Ca: 9 AST: 28 ALT:32 Alk-P: 9.2
Bili:0.7 (DB: 0.3) HbA1c: 6 RBG: 200
Direct coombs test: nl, Peripheral Blood Smear :nl, Hb electrophoresis: nl, Cryoglobulin: nl, PNH flow cytometry: nl.
HIV, Hep B and Hep C: neg
Cold agglutinins: nl

Transfused with one unit of packed RBCs, Hb: 9.4

G6PD enzyme essay: 33 U/dl (low)

Dx: Sulfonylurea induced hemolytic anemia in G6PD deficiency

Problem Representation: 44 y old M with history of DM and orthostatic hypotension presented with dizziness. Patient was started on glipizide 3 days ago and was found to have low Hb, low haptoglobin and high reticulocytes. G6PD enzyme essay confirmed G6PD deficiency.

Teaching Points (Sair and Manaswini)

Approach to Orthostatic Hypotension

- Dysregulation of ANS, Endocrine, Vascular(tone vs Volume in the vessel), neoplastic

In patients with constant low BP: Ask for the use of diuretics, laxatives, drugs especially recent drug changes & look for their side effects, look for signs of dehydration & capillary perfusion on Physical exam

Causes of hypotension

Loss of fluid through 1. GI tract, 2.Kidneys(polyuria due to diabetes, diuretics), 3. Skin. Look for effects of drugs & their side effects, heart failure, anemia, sepsis

- Hypovolemia, Shock, dysautonomia, early shock, adrenal - Some causes of hypotension: How sinister is it in this patient to affect the blood supply to the brain?

If BP improves with fluids, it is imp to know for how long the patient's BP remains stable

Decoding Active hemolytic anemia

- Low Hb on labs indicate- loss of blood via GI /kidneys- occult or hematochezia. R/o sickle cell, hemoglobinopathies
- Dramatic fall in Hb- Can be hemolysis vs bleeding
- Acute fulminant anemia: as Haptoglobin is undetectable(this never seen physiologically unless patient has cirrhosis as liver makes haptoglobin)
- Coombs test is crucial to look for cause: immune vs non-immune causes-Genetic predisposition(G6PD/ pyruvate kinase), exogenous substances(drugs/something in the food consumed),infections(malaria etc). Also think Unstable hemoglobins(like MethHb etc)-->lysed within the RBC's→ it would not be captured on normal electrophoresis
- Is it intrinsic or Extrinsic?: Peripheral smear to check morphology of RBCs→ G6PD, Pyruvate kinase
- HBA1c does not indicate accurate control of blood sugar in the recent months. Why? → hyperproliferative (low HbA1c, shorter RBC lifespan) vs hypoproliferative (High HbA1c, longer RBC lifespan)