04/03/25 Morning Report with @CPSolvers

***"One life, so many dreams" Case Presenter**: Rahul (@RahulPottabath1) **Case Discussants**: Rabih (@rabihmgeha) and Elena (@)*

Scribing (Lera)

CC: 70 F presented to ED with **2 wks of persistent fatigue.**

HPI: Looked more weak and pale than usual. Also noticed decreased appetite and 14 lbs weight loss in past 1 year.

ROS: No LOC, falls, fever, chest pain, SOB, cough, rashes, muscle / joint pain, hematuria or bleeding from other sites.

PMH:
HTN, T2DM (complicated)
Anemia (2 y ago)

Mammogram nl
Colonoscopy nl
Pap smear nl

Meds:
Iron and B12 for anemia
Sitagliptin
Metformin
Valsartan
Amlodipine

Fam Hx: none

Soc Hx: From Central America, no recent sick contacts.

Health-Related Behaviors:
no smoking, drinking or drug use

Allergies: none

Vitals: T: 98 **BP:** 140/60 **RR:** 14 **HR**: 95 **Sat:** 96% at RA
Exam: Gen: 51 kg, no jaundice
HEENT: no tonsillar exudates, no LAD. Conjunctival pallor.
CV: nl **Pulm:** nl
Abd: soft, non-distended, no organomegaly.
Neuro: AO x 3 **MSK:** no clubbing, rashes, cyanosis or edema.

Notable Labs & Imaging:
Hematology:
WBC: 2.8 (neutr 55%, lymph 32%) **Hgb**: 8.2 MCV: 88 **Plt**: 58 Hct: 24.6 RDW 49

Chemistry: Na: 135 K: 5.2 Cr: 0.9 BUN: 21 Ca: 9.3 Glu: 138 Cl: 102 AG: 9
AST: 36 ALT: 17 **ALP**: 2588 Bili: 0.8 Albumin: 4.3 Total protein: 7.8 GGT: nl.
INR 1.3 PTT 38 PT 16.2 **HbA1c** 8.5%
UA unremarkable. HIV, HBV, HCV negative. TSH nl, ANA negative. Quantiferon neg.

CXR: unremarkable. **CT CAP:** diffuse sclerosis of the multiple bones (vertebrae, sternum, ribs, pelvis, femurs). No cirrhosis. 2 mm **RUL solitary nodule**, no LAD. Cholelithiasis w/o inflammation. **Bone scan:** heterogeneous diffusely increased uptake in multiple bones. More pronounced in femur and proximal humerus. C/w superscan 2/2 **diffuse osseous metastatic involvement.**

PTH 78, **25 OH-vit D:** low. SPEP, UPEP nl. **Retic count:** 2.63%, haptoglobin nl. Ferritin 1542, **Vit B12:** 1500. Iron 221, transferrin 192, TIBC 270. **D-dimer:** 10. Fibrinogen 309. LDH 212. Uric acid 6.6.
PBS: normocytic anemia with anisopoikilocytosis (occasional elliptocytes, ovalocytes). Granulocytic left shift with occasional metamyelocytes, myelocytes, promyelocytes. No blasts. Platelets decreased, no clumping.
BM Bx: hypocellular, nl morphology, no blasts. Clusters of atypical epithelial cells with prominent nucleoli (+ CK20, CDX2, pankeratin) and fibrosis. FISH negative. Immunophenotype non-specific (Pancreatobiliary? Bladder? Ovary?)

Dx: pancytopenia 2/2 metastatic adenocarcinoma of unknown primary.

Problem Representation: A 70 year-old female with Hx of complicated T2DM, HTN and non-specified anemia presented to ED due to subacute fatigue, weight loss and generalized weakness.

Teaching Points (Dan):

Approaching Fatigue
-Exertional component? True weakness vs asthenia?
- Fatigue is largely a **neurological sensation** and may reflect something systemic, originating in the **blood**.

Weight Loss Schema
- See CPS Schema. Consider ⬇️Intake, ⬇️Malabsorption vs Inflammatory processes.

Physical Exam Findings
- Use conjunctiva to gauge degree of anemia. Assess for pallor.
- Note patient's *disproportional* weight loss to anemia.
  > If no obvious infectious or autoimmune issue, consider malignancy (favor upper airway/GI)

Pancytopenia & Isolated Elevated Alk Phos
- Alk Phos is a marker of *osteoblastic* activity & can also be found in biliary epithelium.
- Extreme elevation in Alk Phos without AST/ALT involvement favors bone disease.
- Pancytopenia CPS schema: marrow infiltration vs marrow failure vs peripheral process. If pancytopenia with prominent extra-hematologic fingerprint, consider this as the primary driver of symptoms.

Primary Bony Disease Involvement
- Lung cancer, breast cancer, prostate cancer classic culprits
- Non-malignancy: sarcoid & histiocytic disorders