7/19/24 Morning Report with @CPSolvers

*"One life, so many dreams" **Case Presenter**: Jas (@JasBajwa18), Ali Mohamed, Aakriti Jain **Case Discussants**: Rabih (@rabihmgeha) & Reza (@DxRxEdu)*

CC: 88 yr F from cardiology office with SOB and chest tightness with SPO2 89%

HPI: Exertional SOB, chest tightness, SpO2 89% 4-6 weeks PTA: progressive exertional SOB and chest tightness (substernal + radiating to back), 6-8 steps before feeling short of breath), improves w/ rest; lightheadedness, pre-syncopal episode, dizziness, never LOC, pacemaker placed 10y ago

ROS:

Positive: Dry cough, decreased appetite & weight loss (not eating much; 20 P weight loss over past year),

Negative: Sputum, hemoptysis, fever, chills, flu like symptoms, chest pain or SOB while at rest, GI-symptoms incl. N/V, abdominal pain; leg swelling, night sweats, neck swelling, rashes

PMH:
AV block s/p DDD PPM, HTN, HLD, Carotid stenosis s/p carotid endarterectomy, COPD, GERD, osteoporosis

Meds:
Vit D and calcium supplements
Lipitor 40 mg
Toprol XL 100 mg
Amlodipin, HCTZ, Omeprazol

Fam Hx: Maternal uncle died of cancer, no autoimmune dz

Soc Hx:
Traveled by air to North Carolina few months ago, 4 dogs, active in baseline

Health-Related:
No recent travels or surgeries, Former smoker (quit 20y ago), h/o 40 py, 1 glass wine every day (stopped, didn't feel to drink anymore)

Allergies: Iodine contrast

Vitals: T:36 HR:78 BP:124/55 RR: 18 **SPO2** 90% 2L O2 **BMI:** 21
Gen: not in acute distress, oriented x4
HEENT: no cervical or axillary LAD, no JVD
CV: Nl heart sounds and pulses
Pulm: crackles in RUL and LUL, no wheezing
Abd: soft, no palpable mass or tenderness
Extremities/skin: no leg swelling, erythema and swelling in L antecubital fossa (received Iod Contrast in this area?)

Notable Labs & Imaging:
Hematology: WBC: 7.2 (nl diff) Hgb: 11.7 (MCV,MCH nl) Plt: 68k (200k a year ago)
Chemistry: Electrolytes: all wnl, Ca: 12.1 (bl 8-9.5), BUN: 32 Cr:1.7(baseline 0.9-1.1), Trop - , BNP - 312, ESR nl (12), CRP 90.5, PTH < 6.3
25-OH Vitamin D: wnl, 1,25 OH Vit D: wnl, ACE 61 (nl), D-Dimer >7k, **normal Coags,** Iron: low, Iron Sat: 12, Folate+B12 nl, Ferritin: 260
HIV and Hepatitis panel negative; Haptoglobin: wnl, LDH 407, PBS: immature mononuclear cells; **SPEP:** Kappa 3.68, lambda 3.7, normal ration 1.16
Flow cytometry: Monoclonal B Cell population
BMBx: mantle cell lymphoma (MCL) involving 60-70% of marrow cellularity Ki - 67 10-20%; **LN excisional biopsy:** MCL, Ki 67 35%
Imaging:
EKG: RBBB with S wave in lead I, Q waves Lead III
CT chest:multiple acute pulmonary emboli b/l no RV strain confluent mediastinal and bilateral hilar adenopathy, scattered GGOs in RUL and LUL
TTE: L side normal, normal RV size with visually low normal RV systolic function
Doppler: upper limbs - no DVTs, DVT within R femoral and R popliteal vein, no DVT on L side
CT abdomen and pelvis: ill-defined **soft tissue density** infiltrating L renal pelvis and extending along the course of L ureter and retroperitoneum, abnormality extends to aortic bifurcation and continues along R common and external iliac vessels, relatively well-defined **mass** along **R external iliac chain** measures 6.8x4.0 cm, **sclerotic lesion** in **left eighth rib**
Final diagnosis: Stage IV mantle cell lymphoma, currently managed w/ R-mini-CHOP

PR: 88yF w/ exertional SOB, chest tightness, hypoxemia, lightheadedness, hypercalcemia, thrombopenia, multiple PEs, mass along R external chain, sclerotic bone lesion in L eight tib.

Teaching Points (Ethan):
Hypoxemia: think cardiopulmonary causes -> seek clues in physical exams (JVD, abnormal breathing sound, additional heart sounds, etc.)
Weight loss is atypical for heart failure
Presyncope/syncope is also very atypical for CAD, as in CAD patients are usually hypertensive. Possible explanation is either a different underlying systemic disease or severe triple vessel disease
With the rich PMH, it's wise to connect the presentation with her PMH (e.g., carotid stenosis <-> presyncope, AV block causing CHF), and weight loss could be explained by COPD-induced thoracic dysfunction causing cachexia
Consider shunt physiology with hypoxemia resistant to O2.
Hypercalcemia could be explained by HCTZ and vit D supplement, but if considering it as a signal, the most common in-patient causes are malignancies and granulomatous disease.
Mild anemia with disproportional thrombocytopenia -> consider the causes of isolated thrombocytopenia to make progress. (i) infection causing thrombocytopenia (e.g., malaria) (ii) antibodies against platelet membrane: HIT, ITP (iii) environmental causes: MAHA, splenomegaly
Pulmonary embolism -> stratify with risk: high risk: hypotensive patients; intermediate risk: with RV strain; low risk: normal RV function and biologic markers (e.g., BNP)
+ LAD: consider a etiology that cause the LAD and hypercoagulable state and the PEs -> top priority is malignancy
DIC + GGO (blood, pus, water, cells) + hypoxemia not compatible with the risk stratification of PE in this patient + high suspicion of malignancy: consider tumor thrombotic microangiopathy
High LDH: hematologic malignancy> solid cancer