11/17/24 Morning Report with @CPSolvers

***"One life, so many dreams" Case Presenter**: Ethan(@e_chiu17) **Case Discussants**: Maddy(@MadellenaC) and Andrew(@ASanchez_PS)*

CC: 83 y/o M presented with progressive SOB for 1 month

HPI:
The patient experienced severe SOB for 1 month, which worsened the day before presenting to the ED. This was accompanied by bilateral lower extremity edema and dyspnea on exertion. The patient also reported being infected with COVID-19 two weeks ago, after which he developed a cough producing whitish sputum. Low grade fever was also noted at home on the day of his presentation to ED.
ROS: (-) chest tightness/pain, orthopnea, weight gain/loss, palpitation, nausea/vomiting, bloody stool

PMH:
- P. vera 5 years ago, BM RT-PCR of JAK2 mutation 46%, erythrocytosis on documentation, lost to f/u
-Ascending colon pseudoaneurysm rupture 9 months ago
-b/l renal stones
-HTN
-BPH

Meds:
Amlodipine
Tamsulosin

Fam Hx:
Non significant

Soc Hx:
No recent travels

Health-Related Behaviors:
2 ppd smoker 20+years

Allergies: n/a

Vitals: T: 37.5C **HR:** 107, **RR:** 23, **BP:** 193/91, **SpO2**: 93% on RA
Exam:
Gen: dyspneic on appearance
HEENT: pale conjunctiva, anicteric sclera
CV: RRR, no murmurs or gallops appreciated, JVD noted
Pulm: Bibasilar crackles
Abd: soft and flat, no tenderness
Extremities/Skin: bilateral 1+ LE edema

Notable Labs & Imaging:
Hematology:
WBC: 19.4 (neutrophils 90.8% lymphocytes 6%) Hgb: 8.1 Plt: 749
Chemistry:
Na: 137 K: 3.6 BUN: 12.8 Cr: 0.9
AST:wnl ALT:wnl Alk-P: wnl Albumin: wnl
CRP: 19 BNP: 1000 D-dimer: 1.24mg/L
Troponin: wnl
Imaging:
EKG: Biphasic P wave in V1(Left Atrial Enlargement), Left Axis Deviation, incomplete RBBB, Borderline LVH
CXR: peribronchial infiltration, consolidation in LLL, bilateral reticulonodular infiltrate, pleural effusion on the left

After admission, pt had SOB & intermittent low grade fever
Pt treated with O2 95% & lasix → WBC decreased to 14K, dyspnea persisted, unable to taper O2 back to RA.

Blood culture, sputum culture -ve, influenza, covid, atypical infections -ve
TTE: severe pulmonary hypertension and severe TR. Normal LV and RV systolic function. LVEF 60%. Dilation of Ao, LA, thick IVS.
HRCT: emphysema, cardiomegaly, calcifications at coronary arteries and aortic valve, splenomegaly.
Right heart cath: mean pulmonary arterial pressure 34 mmHg, PCWP 22 mmHg, PVR 2.45wu, normal LV systolic function with normal wall motion.
Dx: Group 5 Pulmonary HTN (multifactorial) with mechanisms of groups 3 & 2 & 5 (suspect PV progression to PMF)

Problem Representation: 83 M w/ PMH Polycythemia Vera, P/W SOB fever BL edema found to have signs of JVD bibasilar crackles found to have peribronchial infiltration elevated BNP d-Dimer.

Teaching Points(Parisa):
Hypoxemia /dyspnea → stridor (upper airway); pace of breathing bradypnea (narcotics); tachypnea/hypercapnia(neuromuscular dx); Auscultation/Imaging positive: diffuse crackles edema heart failure/ localized coarse crackle PNA/Negative auscultation/imaging PE; shunt
Subacute SOB: atypical PNA; bilateral edema/dyspnea of exertion towards heart etiology/Inflammatory signature d/t fever
Covid: complications of myocarditis
Distention JVD → Pressure overload (PE/pericardial effusion) vs volume overload (HF)
Polycythemia Vera → hyperviscosity; increased risk of thrombosis; increased risk of PE and elevated right side pressure
Bibasilar crackles → pulmonary edema; esp lack of orthopnea → nonresolving covid; secondary organizing PNA; hemorrhage → High CRP with low PCT suggests a **non bacterial cause**
LVH Pattern → high voltage V5-V6; secondary repolarization (downsloping ST)
Wallen's repolarization → following coronary occlusion and reperfusion, a biphasic T wave may be observed in V2-V3
aVR elevation → accompanied ST depression in other leads (**pointing southeast**) diffuse subendocardial ischemia
ECG findings PE right heart strain → diffuse T wave inversion V1-V6; ST changes for RBBB or ischemia
Pulmonary HTN → Group 1 (idiopathic/ Myeloproliferative); Group 2 (left heart disease); Group 3 (lung disease COPD, ILDs); Group 4 (chronic thromboembolic pulmonary hypertension; Group 5 (unclear multifactorial) → Precapillary and post capillary