



# 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:w/nl ALT:w/nl Alk-P: w/nl Albumin: w/nl  
CRP: 19 BNP: 1000 D-dimer: 1.24mg/L  
Troponin: w/nl

**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 2.45sw, 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