04/21/25 Rafael Medina Subspecialty VMR with @CPSolvers

***"One life, so many dreams" Case Presenter**: Nivedita Kharkongor Chengappa (@nive_kc) **Case Discussants**: Natalie Achamallah*

Scribing (Dan)
CC: Dyspnea

HPI: 66F w/ PMH IDD2, hypothyroidism, PFO w/ closure (2021), DVT, PE (on Eliquis since 2020), PAD w/ b/l thrombectomy c/b LLE/RLE amputations p/w SOB worsening x 4 weeks a/w headaches, runny nose, congestion, post-nasal drip, & new productive cough (x 1 week) in the ED. Tried nebulizations at home, minimal relief. Presented in January.

ROS:
Lives on 2nd floor of home.

PMH:

Hypothyroidism
PFO with closure
DVT / PE
IDD

Meds:
Eliquis

Fam Hx:
Breast cancer (sister)
DM (dad & mom)

Soc Hx:
No pets. Retired in 2020, prior work in FBI. Difficulty travelling out of Baltimore area.

Smoking: 0.5 pack x 20 years, quit in 2020

Health-Related Behaviors:
Allergies:

Vitals: T: Afebrile BP: 100/70 **RR:** 26 **HR**: 100 **Sat: 84% -> 100% on HFNC**
Exam: Gen: appears sick, unable to complete sentences
HEENT: no pharyngeal erythema
Neck:
CV: no murmur, difficult to assess JVD; BLE amputations
Pulm: increased WOB; **inspiratory crackles in bilateral lung fields**
Abd: Neuro: MSK:

Notable Labs, Imaging, & Hospital Course in Chronological Order

Week 1

ABG: pH 7.33, pO2 55, pCO2 47, Bicarb 25
CXR: fluffy infiltrates throughout lung fields, more prominent in upper lobe/lingula. Possible air bronchograms on L-side; enlarged L-hilum.
- Treated with broad-spectrum antibiotics.

Bedside POCUS: No RV strain
CBC: WBC ~14, Platelets normal; H/H stable. **HIV** negative.
CMP: No electrolyte abnormalities; no elevations in LFTs
Pro-BNP: 2,663. **HS-Trop (x3)**: 12, 11, 9
RVP: Pan-negative. **Legionella/H.Pneumo** negative
ESR/CRP elevated. **Procalcitonin** elevated
CT Chest w/ IV Contrast: Patchy infiltrates, mid-lung zone predominant R > L. Not peripheral-sparing, diffuse infiltrates. In lower lung zones, air bronchograms bilaterally. Large PA w/ R-pleural effusion. Concerning for multifocal pneumonia.
TTE: LV EF 60-70%, normal in size, hyperdynamic. RV moderately dilated.

Week 2 (still on HFNC)

IgE normal. **ANA**: 1:160 nucleolar pattern. **dsDNA** negative. **c-ANCA**: speckled pattern. **anti-PR3/MPO** negative. **Mycoplasma/Aspergillus:** neg
- *Patient reported adding Vicks vaporub to inhalers*
- Treating with high-dose Methylprednisolone w/ minimal improvement

1,3-beta-D-glucan: negative
CT Chest w/ IV Contrast: Decreased GGO w/ possible new dense consolidations
Intranasal Bronch: biopsy of RUL/RLL performed
- Patient reports 20-25 lb weight loss over past few months
CA 125: 115

Dx: Poorly Differentiated Carcinoma secondary to Gynecological Primary Malignancy

Problem Representation:
66F with PMH of PE on anticoagulation and chronic comorbidities p/w 4 weeks of worsening dyspnea anand hypoxia. Imaging showed bilateral infiltrates with air bronchograms and an enlarged hilum; minimal improvement on steroids and antibiotics. Weight loss component raised concern for atypical infection, inflammatory, or malignant process.

Teaching Points (Oumaima):

SOB over weeks: Look for what made the patient Finally present - Cardiac history - exposures - superinfection
In the ED setting: Stabilize the patient - Get a holistic first survey - Try to get ABG - VBG STAT for these patients and an US in assess the cardiac function sooner and later: Rapid results and allow for immediate clinical intervention.
Severe hypoxemia despite oxygen support is a red flag and suggests shunt physiology or need for more respiratory support.
Weeks of progressive symptoms: **Dual pathology or unifying DX?** - 2 possibilities (Chronic progressive illness or Acute trigger (superimposed infection))
Infection is less likely to cause weeks of symptoms which suggests a chronic process with acute decompensation
SOB + CXR with air bronchograms and no pleural effusions: Moves the needle more towards infection than fluid overload.
In this context, it is reasonable to start broad spectrum ATB while testing for the infectious cause including viral testing
In patients on Eliquis are not likely to get a PE **UNLESS** we suspect non-compliance, malabsorption, or an overwhelming hypercoagulable state.
High Procal: Makes a Bacterial component more likely
CT with contrast: Important for vascular and inflammatory disease
Bronchial thickening may signal 2 pathologies (Sarcoma including Kaposi's with "Flame-Shaped" appearance or ABPA with "finger-in-glove" pattern - IgE and eosinophils can be important clues towards ABPA
PHTN: Chronic allergic/infectious diseases can lead to pulmonary vascular remodeling leading to pHTN
CT: Transition from GGO to denser consolidation can reflect progression of an infectious or inflammatory
Partial steroid response: an infl component but there could be other factors at play(fungal?)
"Is what I'm doing still making sense?" Ongoing reassessment and adapting to new data points is crucial