10/27/24 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: Elena (@) Case Discussants: Yazmin (@) and Kirtan (@)

CC: 66 yo M presents to the ER with cough and fever

HPI: 66 y/o M presents to ED with 10-day hx of dry, non-productive cough, progressive and daily, accompanied by fatigue, fever up to 38.5°C, diffuse myalgias, and exertional dyspnea. SOB has worsened to the point that even minimal exertion, such as going to the toilet, triggers dyspnea, which was absent prior to symptom onset. Previously active, regularly biking and walking; lives at home with partner who is asymptomatic. No recent travel. Denies CP, pleuritic pain, GI symptoms (nausea, vomiting, diarrhea, abd pain), arthralgias, or rash.

PMH: none

Meds:
No meds
Strep vacx 5 months ago

Fam Hx:

Soc Hx: From Germany

Health-Related Behaviors:
no smoking, never lived close to people who did. No other substance abuse

Allergies: No childhood asthma, no eczema

Vitals: T:37.8 HR: 85 **BP:** 120 X 75 **RR:** 96% RA BMI 24
Exam: Gen: Reduced general state of health
HEENT: No enlarged lymph nodes, no oral ulcers, moist mucous membranes **CV:**
Pulm: normal mobility, rales and crackles on the right basal region
Abd: soft, non tender
Neuro: no evidence of focal deficits, PERRLA, no meningismus
Extremities/skin: no redness or swelling

Notable Labs & Imaging:
Hematology:
WBC: 13 neutrophils of 85 Hgb: Plt: 530

Chemistry:
AST:wnl ALT:wnl Alk-P: Albumin: CRP: 164
No hypoxemia, no hypercarbia, Lactate & LDH: wnl
Troponin: wnl BNP: wnl
Respiratory PCR panel: negative

Imaging:
CXR: right pleural effusion
Pleural paracentesis: pH 7.62, protein 45, pleural/serum protein quotient 0.562, LDH 800, glucose 5.3 (wml), cholesterol/triglycerides/bilirubin WNL, leukocytes 3.3 (76% neutrophils, 23% eosinophils), hematocrit <3.

Further Management:
Urine antigen: legionella, strep pneumo -
Blood Culture UC: negative
Chest CT: Bilateral central PE, no consolidation

Dx: PE

Problem Representation:
66 yo m presents w 10-d hx of dry cough, fever up to 38.5°C, fatigue, and exertional dyspnea, previously active with no prior illnesses or recent travel. Clinical examination reveals fine rales and crackles at the right basal lung region. Laboratory results show leukocytosis of 13, predominantly neutrophils, elevated CRP of 164, and normal liver and kidney function, troponin, and NT-proBNP. Respiratory PCR panel is negative.

Teaching Points::
Fever: sign of inflammation **Cough**: onset? Characteristics (productive/nonproductive)?

Triggers? Exposures, his job, allergies, meds, ongoing cardiac pathology, previous smoking hx
SOB added to cough → Process spread to lower airways
SOB: Based on **anatomy**: Bronchi, Bronchioles, main alveoli, lung parenchyma, vasculature

SOB with exertion → lungs: fluid overload, ILD, pulm HTN

Symptoms not remarkable so not widespread → large airways affected mechanically or physiologically eg. bronchospasm

Myalgia is nonspecific but can point to influenza, legionella. These usually present with thrombocytopenia, transaminitis → here its normal so we can r/o atypical pneumonia.

Atypical pneumonia will also present with other symptoms like GI symptoms in legionella or laryngitis in chlamydia or tubular damage in leptospirosis (electrolyte disturbances)

CAP mimics → CHF, vasculitides, Pulm emb, Drug induced pulm disease, hypersensitivity rxn.
Pleural paracentesis: elevated LDH→ is this real LDH? (can be elevated due to hemorrhage) , if yes → exudative
Elevated eosinophils (>10% in pleural fluid is significant) → parasitic or (T2h cells) inflammation so can't fixate on it but supports exudative process

G+ve g-ve, pulm adenocarcinoma, pulm lymphoma → send pleural fluid for C&S
CT: b/l central PE suggests hypercoagulability. Is it autoimmune, acquired, malignancy?

Could this still be inflammatory? Behcets, ANCA vasculitis, PNH