



6/15/23 Morning Report with @CPSolvers



"One life, so many dreams" Case Presenter: Peter Kim Case Discussants: Rabih (@rabihmgeha) and Oumaima (@OOutani)

CC: 35 year old male presents to the ED for 6 days of subjective fever, productive cough and shortness of breath

HPI:
Left sided chest pain 6 days ago that radiated to the left lower quadrant, developed a productive cough of white sputum and presented one episode of bloody sputum

ROS: Loose stools for the past days.

PMH:
Seizure disorder (last seizure 5 months ago)
Inguinal hernia

Meds:
Trileptal (not currently using it)

Fam Hx: Kidney cancer
Soc Hx: Construction and demolition worker. Travel history to Brazil 2012

Health-Related Behaviors:
Smoking, Vegan
Allergies: No allergies

Vitals: T: 36.3 HR: 101 BP: 118/69 RR: 24 SpO2: 93% on room air improved with nasal cannula to 97%

Exam:

Gen: No acute distress **HEENT:** Unremarkable

CV: Mild tachycardia, no murmurs

Pulm: Decreased breath sounds in lower left lung fields

Abd: Soft, nondistended **Neuro:** Grossly normal **Extremities/skin:** No edema

Notable Labs & Imaging:

Hematology & Chemistry:

WBC: 10.9 Hgb: 11.1 Plt: 693 Lactic acid 1.7, BMP: Normal

Albumin: 2.8 Protein: 6.8 Protein Gap: 4 D-dimer: 3069 Vitamin B12 - 68

Imaging:

CXR: Left lower lobe/(left pleura?) opacity with interstitial markings, tracheal deviation towards the left (potential left lower lobe collapse)

CTPE: Opacity on the left side (wedge shaped pleural process), right sided air fluid level. Dome shaped structure on left side could be a gastric bubble. **Radiology read:** Diffuse ground glass opacities ground glass opacities. Left lower lobe consolidation with cavitation and air fluid level measuring 10x8x7cms.

COVID-19, influenza, RSV negative. HIV, HCV negative. AFB, legionella, aspergillosis, crypto, blasto, histoplasma negative.

Further course:

Patient was started on empiric vancomycin and ampicillin/sulbactam, with quick improvement. He was sent home with amoxicillin for 8 weeks. At 7 weeks follow-up, all infectious workup was all negative. No specific pathogen was isolated. Repeat CT showed resolution of the cavitation.

Final dx: Bacterial lung abscess given successful empiric antibiotic treatment.

Problem Representation: 35 year old male presents with acute thoracic inflammatory syndrome, found to have cavitation on imaging, with improvement after antibiotics.

Teaching Points (@Noah_Nakajima):

Young man with fever and cough, not so worrying, but with *dyspnea*... That indicates a problem in the lower respiratory system.

Disease in young patients: bad luck (?infections), bad genes (?cancer history), bad environment (?pneumoconiosis).

Inflammation in the chest:

- Base-rate: pneumonia.

- Chest pain and hemoptysis: concerning for invasive process.

Too much information: simplify and reframe

- Acute inflammatory thoracic process: parenchyma, vessels, pleura

> Acuity suggests infection. Course and symptoms suggests PE then infection.

Pulmonary CAVITY: Cancer, Autoimmune, Vascular, Infection, Trauma, Youth

2 lines of thinking: indolent process that is being revealed now vs truly acute catastrophic event.

- Size of cavitation moves us to chronic process

> If chronic, important to establish immune status of the patient.

> Subtle clues: anemia, thrombocytosis

Lung cavitory lesion: successful empiric treatment with antibiotics suggests bacterial infection.