



5/27/26 Morning Report with @CPSolvers



"One life, so many dreams" **Case Presenter:** Ramaswamy **Case Discussants:** Sharmin & Saketh
<https://clinicalproblemsolving.com/present-a-case/>

Scribing (David)

CC: 61 yo male with 5 days of fever, diarrhea and RUQ discomfort

HPI: fever over 5 days up to 39.2°C, associated with malaise, body aches and chills.
Diarrhea 4-6 episodes/day, none bloody, non mucous, no tenesmus.
RUQ discomfort, dull, didn't radiate.

ROS:
Dry cough (minimal) for the last 4 days, not progressive, without sputum, chest pain. No relieving factors.
ROS (-): jaundice, vomiting, dysuria, rash, chest stiffness, sick contacts

PMH:
HLD, HTN, T2DM

Meds: lisinopril, metformin, atorvastatin

Social Hx:
No travel history
Worked in construction

Health-Related Behaviors: former smoker (25 pack years), No other illicit drug use
Allergies: none

Vitals: T: 39.1°C HR: 104 BP: 105/64 RR: 20 Sat: 94% RA

Exam: Gen: tired, dry mucous membranes
HEENT: Otherwise normal
CV: no murmurs
Pulm: fine crackles in right lung base
Abd: no organomegaly, mild RUQ tenderness, no tenderness/rebound
Neuro: normal, except for inattentiveness, but able to follow commands, no focal neuro deficits

Notable Labs & Imaging:

Hematology: WBC: 9.8 Hgb: 38.4 Plt: 138.000. Smear: normal, no schistocytes
Chemistry: Na: 130, K: 3.3, Cr: 1.7 (bl 0.9), Glucose: 189 (HbA1c 8.4%)
AST: 165 ALT: 180 Bili: 1.1, CRP: 2.10, ferritin 95, procal 1.1 Lactate 1.8, CK 620
Micro: Resp swab (COVID, Flu, RVS): negative

Imaging:
CXR: right basilar opacity
RUQ US: hepatic steatosis, no bile duct dilation, no cholecystitis

Evolution: started on fluids, insulin and antibiotics (ceftriaxone and metronidazole). Fever, confusion and diarrhea persisted. Needing 2 L/min on NC.

Repeat labs: WBC 11.5, platelets 108, Na 124, Cr 2, AST 220, ALT 150, CK 1050, ferritin 1600.
More imaging: CT head: nl. CT AP: patchy right lower lobe consolidation, no intra abdominal process.
Patient was switched to ceftriaxone and azithromycin, but deteriorated from respiratory point (needing 4 l/min on NC) and fever persisted.
Blood cultures: no growth. Sputum: PMN without organism, MRSA swab negative, respiratory viral PCR negative, urine Legionella antigen negative, malaria smear negative, Lyme negative, Anaplasma and Ehrlichia PCR negative.
CT chest: dense right lower lobe consolidation, left lower lobe opacities and pleural effusion.
TTE: normal (EF 55%).
On day 5 (48h after azithro started), patient started to improve.
Repeat blood cultures: no growth.
Bronchoscopy - bacterial cultures: negative, PCR for Legionella positive. Repeated urine antigen for Legionella negative. Patient got better and was discharged.

Dx: Legionnaires disease (group 1 Legionella)

Problem Representation: 61 yo male presents with acute fever, RUQ discomfort, diarrhea and confusion. Labs showed mild thrombocytopenia, hyponatremia, AKI, mild hepatitis and rhabdomyolysis, and CXR showed right lower lobe consolidation. Microbiology studies negative, until BAL PCR for Legionella came back positive.

Teaching Points (Krishna)

- **Fever and Abdominal pain** PLUS **Diarrhea** = possibly Localizes the GI as the source (BUT also consider legionellosis/Flu-like illness) /**No miss/ominous = Cholangitis, Cholecystitis**
- **Relative Bradycardia:** typhoid fever, brucellosis, lyme, legionella, sepsis
- **Transaminitis** + volume depletion (**HypoNA**, pre-renal AKI) + Inflammation(ferritin + CRP) + **Pulm infiltrates** = **Legionella**
- **ALSO LFTs + Mild Thrombocytopenia** = Think **Doxy-deficiency schema**(Zoonotic- Q fever, Lepto, Brucella; Tick-borne - Borrelia, rickettsia)
- Azithromycin is the first line for legionella. Consider Levofloxacin in sick patients
- Clinical picture/improvement >>> singular diagnostic testing
- Sensitivity and specificity of Urine antigen- 70% and 100%
- A key limitation is that the assay only detects Legionella pneumophila serogroup 1, so a negative test does not exclude Legionella infection when other species or serogroups are possible.
- *If the urine antigen is negative and Legionella infection is still suspected, the next step is to send PCR or culture on a lower respiratory tract sample*