10/28/21 Morning Report with @CPSolvers

***Case Presenter**: Catarina Costa **Case Discussants**: Sharmin Shekarchian (@Sharminzi) and Rabih Geha (@rabihmgeha)*

CC: Dyspnea and productive cough

HPI: (August, preCovid)80yF p to ED w 1d dyspnea and productive cough with mucoid sputum. Also had fever (39.5°C) and a diffuse rash. Non pruriginous.

ROS: Worsening of L knee pain 4 days before presentation and swelling. It hurts mostly at night (different from usual pattern) + arthralgia in R wrist in rigidity worse at night and rest. No B symptoms, hemoptysis, HA, abdominal pain.

PMH: BMI 42. T2DM - no end organ damage. Uncontrolled HTN w/ LV hypertrophy and preserved EF. Degenerative OA of both knees - needs crutches. Chronic lymphedema LE.

Meds: an ACE inhibitor, sitagliptin, furosemide, metformin, daily paracetamol and ibuprofen,

Fam Hx: None.
Allergies: None

Soc Hx: From Portugal. Couldn't read or write. Retired. Widower. Lived alone - rarely left house. Support from neighbor who does her shopping. No pets. Stray cats and dogs on her street. No contact w/animals. Only drinks water from public system. No travel.

Health-Related Behaviors: No drug use, no smoking, no alcohol use. Had received annual influenza vaccine. No pneumonia vaccine.

Vitals: **T**: 38.3 **HR**: 120 **BP**: 138/68 **RR**: 24 **SpO_2**: 91% RA.
Exam:
Gen: No acute distress.
CV: Normal. **Pulm**: Normal. **Abd:** Normal.
Neuro: AOx3, no meningeal signs.
Extremities/Skin: pronounced lymphedema (different from bl). L knee was swollen, tender to palpation but no other inflammatory signs. Swollen b/l hands. **Tenosynovitis** of R wrist. Generalized purple non palpable pustules and non blanchable petechiae.

Notable Labs & Imaging:
Hematology: WBC: 6.6 (80% N, AC 0.76 L) Hgb:12.1 Plt: 210

Chemistry:Na:135 K: 4 BUN: 43Cr:0.85 glucose: 220
AST: 40 ALT: 43 Alk-P:156 T. Bili: 1.15 D. 0.64
Albumin: 3 TP: 7.14 CRP: 388.
ABG: pH 7.46, CO2 37.4, O2 54.2, HCO3 27 on RA.
Troponin: normal.

Infectious: HIV: Neg. CMV, EBV: past contact.
Legionella urine antigen, Rickettsia, Mycoplasma, Leptospira: neg.
Blood cultures: neg.

Imaging:
CXR: discrete interstitial pattern bl. Cardiomegaly.
Abdominal USG: normal.
CT chest: diffuse ground glass opacities b/l.
Echo: previous LV hypertrophy w/no veg.

Was treated w/ceftriaxone and later piptazo with no results. Switched to azithromycin with which she improved.

Serology IgM and IgG Coxiella burnetii positive **Final Dx: Q Fever**

Problem Representation: 80yF from Portugal w/PMHx of T2DM, HTN, OA p/w acute dyspnea, productive cough, diffuse rash and arthralgia.

Teaching Points (Rafa):

- **DYSPNEA AND PRODUCTIVE COUGH**
  1 day of dyspnea - don't miss diagnosis - cardiological and pulmonary etiologies such as PE and ACS.
  Fever + productive cough - think about pneumonia until proven otherwise
  Normal organisms - Stepto, H. influenzae - usually localized pneumonia - not disseminated unless they're immunocompromised
  World - atypical infections, viral, endemic mycoses, Legionella - disseminated causes
- **DIABETES**
  Increase risk of certain infections
  GN rods (Pseudomonas, amyloidosis), fungal (Mucor, cryptococcus)
- **HYPOXEMIA**
  First: check the pulse oximetry!
  Second: hypoxemia improves with minimal O2?
  - Yes: nl Aa gradient (high altitude, hypoventilation-opioid use, increased BMI).
  - No: increased Aa gradient - V/Q mismatch, right-to-left shunt, diffuse limitation (fibrosis)
  If PE and imaging (CXR, CT) negative - move away from the parenchymal / pleural space - think about the vessels
- **Q FEVER - coxiella burnett**
  Zoonotic infection - flu-like illness, pneumonia, hepatitis , acute endocarditis, maculopapular rash, meningitis/encephalitis