6/12/20 Morning Report with @CPSolvers

***Case Presenter**: Alec Rezgh(@ABRezMed)* ***Case Discussants**: Rabih Geha (@rabihmgeha) and Reza Manesh (@DxRxEdu)*

CC: cough

HPI: 30M p/w 2 months cough, malaise, fatigue. He has experienced few episodes of NBNB emesis and 1d subjective fever and SOB

ROS: + 20lb weight loss, decreased appetite, no dysphagia/odynophagia, +headache, no photo/phonophobia, +back pain, no chest pain/syncope

Significant other had flu recently, but otherwise no sick contacts.

PMH: Asthma (well-controlled)

Meds: Albuterol PRN

Fam Hx: N/A

Soc Hx: Lives in the Southwest U.S. Student

Health-Related Behaviors: Never smoker 1-2 EtOH per month Occasional marijuana use

Allergies:

Vitals: **T**: 36.4 **HR**:110 **BP**:116/56 **RR**:28 **SpO_2**: 88%RA → 96% 2L

Exam:

Gen: well-appearing, tachypneic

HEENT: wnl

CV: tachycardic, regular, no M/R/G

Pulm: tachypneic, crackles in bilateral lungs with decreased breath sounds at R base, ttp R lateral chest wall

Abd: soft, non-tender

Neuro: A&Ox3, CN II-XII intact, 5/5 UE/LE, normal reflexes, sensation intact

Extremities/Skin: no LE edema, no rashes

Back: non-tender, ?deformity

Notable Labs & Imaging:

Hematology:

WBC: 19.5 Hgb:10.7 MCV 70, Plt: 476, normal diff (mild eosinophilia)

Chemistry:

Na: 135 K: 3.8 Cl:103 CO2:24 BUN:16 Cr: 1.18 glucose: wnl Ca: wnl Phos:wnl Mag:wnl; AST: ALT: Alk-P: T. Bili: Albumin: (WNL)

Total protein: 9.4

Albumin: 3.1

UA: unremarkable

HIV: neg

HCV neg, trop neg, D-dimer 3000, lactate 1.7

Ferritin 519, Fe sat 8%, Fe 14, TIBC 168 normal smear

UPEP/SPEP with increased polyclonal gammaglobulins

Imaging:

EKG: sinus tach, no ST/T changes

CXR: RLB atelectasis vs. pna, small pleural effusion

CTPE: no PE, osseous erosions T2-T10 vertebral bodies, no disc involvement, large paraspinal/mediastinal soft tissue fluid collection, moderate R-sided loculated pleural effusion

MRI Brain: neg acute, MRI C-spine, L-spine: without disease

MRI T-spine w/w/o: pre-vertebral abscess from T2-7, adjacent osteo, epidural phlegmon T6-7, peripheral R lung concerning for empyema, numerous soft tissue abscesses T2-9

Pleural fluid: 20K WBC, 5K RBC, 75% PMN, LDH 2976, protein 6.3, glucose 22, pH 7.55, Gram stain/Cx neg B,D-glucan>500, pleural cultures: +rare mold, Biopsy of spine: +coccidioides immitis

Problem Representation:

30M p/w chronic cough and acute onset inflammatory pulmonary syndrome fth mild eosinophilia, atypical hematogenous osteomyelitis with spinal biopsy that returned +cocci.

Teaching Points (Priyanka):

Chronic cough- post nasal drip, reactive airway disease (asthma), medications (ACE-i) -- cough receptors activated from nose→ alveoli

Inflammation: weight loss + fever (incr specificity, low sensitivity). **IMADE** - infection, malignancy, autoimmune, drugs, endocrine. Inflamm in the young→ atypical bacteria, cancer, endocrinopathy, immune status (HIV?)

Tachycardia- hypoxia, decreased SV, Inflammation

Crackles- filling of the alveoli (could be pus, water, blood, cells) or atelectasis. Consider WBCs/pus with hx of inflamm; + pleural effusion with decr breath sounds

TTP on chest wall: bruised rib, costochondritis, coughing

Thrombocytosis: reactive or in the BM? Reactive processes > > clonal processes (8:1).

- **Reactive**: infection (chronic intracellular dz- TB, toxo, ie: in macrophage or fibrous pus filled cap)
- **Autoimmune**: seronegative, vasculitis, sarcoid, IBD
- **Malignancy**: usually solid malignancies (night sweats- liquid malignancy; thrombocytosis- solid cancer). Thrombocytosis + NS - likely not CA

Gamma Gap: polyclonal Ig reacting to a chronic inflamm process (r/o HIV, Hep B, Hep C)

Microcytic Anemias- IDA (bleeding?); thalassemia, ACD

Abnl Eosinophils: consider viral, bacterial, fungal, parasitic; less likely adrenal insuff

Disk spaces: vascular structure (infx does not need BV, CA typically does); absence of disk involvement makes CA a possibility

Osteomyelitis: hematogenous spread predilection for lumbar spine (S. aureus, Strep, atypical infections (ie: TB, salmonella, brucella, actinomycosis, cocci) tend to go to thoracic spine.

B-D-glucan- not present in all fungal infxn; Fungi: Yeast (candida, crypto, PCP), endemic mycoses, molds (IC pts)- no B-D-glucan in crypto, blasto, mucor)