05/10/21 Morning Report with @CPSolvers

***Case Presenter**: Rebecca Berger (@RebeccaEBerger) **Case Discussants**: Gabriel Talledo (@gabrieltalledop) and Han Nguyen(@flowerfreeland)*

CC: Fevers for 4 months

HPI: 63 year old male presented with night sweats, chills, and progressive fatigue for 4 months. Blood work up and echo normal. Pain in left knee (h/o knee replacement for OA in december 2019). Pain relieved by acetaminophen. No redness or swelling. New onset nausea and epigastric pain that prompted him to present to the hospital. May have lost some weight. No SOB, cough, bowel disturbances, or any neurologic symptoms. No COVID exposure, received COVID vaccine
Recent colonoscopy normal.

PMH: 2018- Bioprosthetic aortic valves (for AR).
BPH
HTN

Meds: Aspirin, vitamins, supplements

Fam Hx: Father- Colon cancer (in 60s)

Soc Hx: Owns a Motorcycle repair shop. No pets or recent travel.

Health-Related Behaviors: No IVDU

Allergies:

Vitals: **T**: 38.3 **HR**: 93 **BP**: 112/83 **RR**:16 **SpO**: 95% on RA
Exam:
Gen: Appears well. No evidence of cachexia **HEENT**: nl
CV: Crescendo-decrescendo systolic murmur at the base of heart
Pulm: nl
Abd: mild epigastric tenderness to palpation
Neuro: nl
Extremities/Skin: nl. No stigmata of endocarditis. Wound looks unremarkable.

Notable Labs & Imaging:
Hematology: WBC: 8.8 (71% polymorphs) Hgb: 10.4 Plt: 154

Chemistry:BMP nl. LFT nl. Albumin: 3.1 ESR 49, CRP 6.6, RF -nl

Imaging:
EKG: normal PR interval, narrow QRS, normal QTC 399ms, no ST-T wave changes, delayed R wave progression, no Q waves. No prior for comparison.
CXR (Chest and Knee): normal
Blood cx (three sets- Negative (at 3rd day so far).

Left knee aspirate- 23,000 RBCs (traumatic tap), 6,900 WBCs (89% polymorphs)

CT abdomen - Large geographic hypodense region within the mid inferior spleen (probable infarct). Subcentimeter hypodense foci within the liver.
CT chest- nodular thickening of prosthetic aortic valve.
Echo- Hypodensity on ventricular aspect of aortic valve consistent with a vegetation. Started on Vanc and CTX .
Culture (8th day) - Cardiobacterium hominis

Final Dx: C. hominis endocarditis.

Problem Representation: 63 year old male with severe AR (bioprosthetic valves) who has undergone a total knee replacement presents with fever and constitutional symptoms since 4 months.

Teaching Points (Priyanka):

- **Fever**: who is the pt (context, travel, immuno, CA screening)) x timecourse (subacute)
  - **iMADE-** infection (knee replacement, aortic valve), malignancy (family history), autoimmune, drugs, endocrine
  - Incorporating **Base rate of disease:** Start with infection⟶ then progress to malignancy once infxn is r/o
- Remember to tap the knee even without overt signs of infxn/inflammation- knee joint is a deep space!
- **Collecting clues:** crescendo/descrendo murmurs, slight anemia, evidence of inflammation
  - **Subacute endocarditis**: HACEK organisms, bartonella, most commonly S viridans or enterococcus
    - Time-course- slow, smoldering
    - Splenic involvement
    - Can still meet Dukes criteria even without definitive culture data!
- **Synovial fluid analysis:** WBC<10,000, decreases probability of active prosthetic joint infection. Late joint infection, when synovial fluid WBC <3000, decreases probability of PJI
    - This pt: very high WBC⟶ persistent infectious process in PJ