10/19/20 Morning Report with @CPSolvers

***Case Presenter**: Andrew Sanchez(@ASanchez_PS) **Case Discussants**: Darya Bondarenko and Chioma Iheanyi (@chiomandukwe_au)*

CC: Decreased appetite, fatigue, weight loss

HPI: 62yF presenting w/decreased appetite, fatigue and 10lb weight loss in last 1.5months. She felt she could not provide any further description.

ROS: No odynophagia, dysphagia, abdominal pain, nausea and vomiting.

Admitted to outside hospital for AMS 1.5months ago. Afebrile, hypertensive (170/120), tachycardic. Admitted to ICU, treated empirically for meningitis w/improvement. Brain MRI showed no acute changes. LP not concerning for infection. Labs: HIV positive, CD4 27, Viral load 101,000. Started on bactrim, antiretrovirals were deferred for outpatient settings. Has not started antiretrovirals yet.

PMH: HTN, Hyperlipidemia

Meds:NA

Fam Hx:NA

Soc Hx: Most of life spent in an African country.

Health-Related Behaviors: Monogamous

Allergies:Hives to aspirin and sulfas.

Vitals: **T**: 39C **HR**:97 **BP**:112/71 **RR**:18 **SpO_2**: 99% RA
Gen: Lying flat in bed, no distress.
HEENT: Positive for thrush.
CV: Unremarkable. **Pulm**: CTAB.
Abd: Mildly distended, soft, nontender.
Neuro: No focal deficits. Oriented 3 spheres.
Extremities/Skin: Warm, dry, no edema. No rashes or lesions visible. Large scar with dermatome pattern over left shoulder region.

Notable Labs & Imaging:
Hematology: WBC:4.15 (Low % lymphocytes) Hgb:7.1 MCV 83 Ret 1.1% Haptoglobin 321(high nl) Plt:87

Chemistry:Na: 122 K:4 Cl:91 CO2:21 BUN:14 Cr:0.94 glucose: 97 AST:151 ALT:68 Alk-P:88 GGT 119 T. Bili: 0.5 Albumin:2.6 TP: 8.1 Ferritin 8600
HIV viral load: 537,000 CD4: 6. LDH 849. SPEP: Polyclonal gammopathy.
Micro: fungi (b2 glucan) neg; crypto, histo neg.
Viral: EBV PCR 755, CMV 794, HCV antibody neg. HBV non-immune.
Toxo IgM and IgG positive, PCR neg. RPR neg. Strongyloides and schistosoma IgG neg. Bartonella IgG and IgM neg. Blood cultures neg.
2 Sputum AFB neg. Quantiferon gold: indeterminate.

Imaging:
CTA abdominal: (previous) necrotic retroperitoneal lymphadenopathy. → (current) Diffused retroperitoneal mesenteric peripancreatic necrotic lymphadenopathy. Lower chest some cm pulmonary nodules.
CT Chest: scattered sub5mm bilateral nodules present w/ a dominant 5mm left upper lobe nodule. 3.5*2.7cm left supraclavicular lymph node.
L Supraclav nodule biopsy: extensive coag necrosis and few necrotizing granulomas. No large atypical lymphocytes or Hodgkin cells seen. Nielsen stain and AFB stain: scattered AFB. No fungal organisms. Flow cytometry: no immunophenotypic evidence of B cell lymphoma. No lymphoma concerning.

3rd sputum AFB: positive → **presumably MTB.** AFB blood culture: NGTD.

Problem Representation: A 62yF with advanced HIV/AIDS presents with a subacute course of decreased appetite and fatigue after having an AMS episode. Evaluation showed a high protein gap, abdominal lymphadenopathy and pulmonary nodules. Lymph node biopsy and a final 3rd sputum positive for AFB gave the final dx of **presumably MTB.**

Teaching Points (Kiara):

- **AMS + HIV = MIST:** Metabolic (Vit deficiency), Infx (opportunistic image - like viral encephalitis), Structural, Toxins
- Immunocompromised prioritize infection think about multiple infections
- **Lymphadenopathy: MIAMI** (Malignancy, Infection, Autoinmune, Miscellaneous, Iatrogenic)
- **Lymph nodes + HIV:** Malignancy (Cervical cancer, lymphoma, Kaposi)
- **Fever + Lymphoma in HIV+ think of Mycobacterium Avium infections (MAC)**
  - **Disseminated:** B symptoms, abdominal complaints, anemia, elevated Alk-P -> Blood culture
  - **Localized:** Cultures, biopsy
- Dermatomal Rash: Probably EBV, candida
- **Pulmonary nodules:**
  - **Centrilobular:** Infection (virus, bacteria, mycobacteria, fungi disseminated)/Non infection (aspiration pneumonia)
  - **Perilymphatic:** Hematologic Infx(Diss fungal, mycobacteria, septic emboli)/ Non hematologic (solid tumor metastasis)
  - **Random**
- **Granulomatous diseases:** Mycobacteria, "ELA" like Brucella, Cokiella, fungal like hysto, blasto, candida, lymphoma, autoinmune (vasculitis, CCA, GPA, EGPA, IBD), chronic like drug reactions and Berylliosis
- **BD Glucan:**
  + Candida, Aspergillus, PCP, Coxi, Hysto
  - Mucor, Blasto , Crypto
- **HLH:** Aggressive excessive immune activation. 1ry child and 2ry adults due to infection, malignancy/autoimmune -> Fever splenomegaly, lymphadenopathy, high ferritin, diminished fibrinogen, high triglyceride.