04/05/21 Morning Report with @CPSolvers

***Case Presenter**: Fernand Bteich (@FernandBteich) **Case Discussants**: Dhruv Srinivasachar (@TheRealDSrini) and Kara Lau (@ytk_lau)*

CC: chronic cough, weight loss, poor appetite, urine discoloration

HPI: Middle aged female presented with multiple symptoms (above) for few months. Unintentional weight loss of 30 pounds in 6 months and cough productive of clear sputum for 6 months. Recent travel to Dominican Republic few days/weeks ago - took prednisone which helped her symptoms. Orange-brown discoloration of urine for last few weeks/days. Denies fever, chills, diarrhea. COVID-19 negative x2.

PMH: Rheumatoid arthritis -2008 (+RF, CCP, not on therapy currently, azathioprine, leflunomide past)
ILD - restrictive
Sickle cell trait
GERD, HTN

Meds:albuterol, Benzonatate, Calcium, Vit D, diclofenac gel, meloxicam, famotidine, iron, vitamin supplements Losartan, HCTZ

Fam Hx:
Sister - breast cancer
Sister - colon cancer age 50
No autoimmune history

Health-Related Behaviors:
Drink occasionally, no drug consumption

Allergies: NKDA

Vitals: **T**: 102 **HR**:70-80s **BP**: 120/86 **RR**: **SpO_2**: 97% RA
Exam: **Gen**: alert, appears stated age, not in acute distress
HEENT: atraumatic. No palpable masses in neck/thyroid.
CV: RRR, no murmurs, audible S1, S2
Pulm: Fine crackles bilaterally. Normal breath sounds.
Abd: soft, non-distended, non-tender
Neuro: no focal deficits, moving all extremities
Extremities/Skin: no edema, no skin rash. No swelling/pain at joints - old deformities from past.

Notable Labs & Imaging:
Hematology: WBC: 2.1 (ANC 600) Hgb:7.7 Hct 26; MCV-mid 60's Plt: 171, Retic count 90
Chemistry: Na: 142 K: 3.8 Cl: 101 CO2: 22 BUN: 21 Cr: 1.11 glucose: 120 Ca: 9.6 Phos: 3.2 Mag: 1.9
AST: 75 ALT: 39 Alk-P: 179 T. Bili: 1.5 Albumin: 2.8
Ferritin 2034, B12 1200, folate 8.9
U/A: protein 30, WBC 6-10, RBC 0-3, blood negative, SG 1.020
Uric acid 5.7, LDH 676, fibrinogen 527, INR 1.3, PTT 56
Mixing study corrected immediately at 2 hours, LA: neg
HIV neg, Hep A immune, Hep B/C neg, Mycoplasma/CMV neg, EBV PCR 319,000, EBV nuclear antigen Ab >600

Imaging:
CT A/P: interstitial lung disease, prominent in RUL but similar to prior exam; stable hemangioma segment 4A of liver; spleen and liver slightly enlarged; ill-defined splenic hypodensities, pelvic lymphadenopathy - R retroperitoneum
Bone Marrow Biopsy: hypercellular at 60-70%, increased hematopoiesis, no blasts, no invasion
Pelvic Lymph Node Biopsy: CD30+ neoplasm w/ Reed-Sternberg cells **Final Diagnosis: Hodgkin's Lymphoma**

Problem Representation: Middle aged F with RA, not on therapy, presents w/ chronic cough, weight loss, and urinary discoloration, w/fever and labs significant for pancytopenia & high ferritin w/ CT evidence of splenic hypodensities and pelvic LAD.

Teaching Points (Maria): *"keep chasing the rabbit hole"*

- **Multiple CC**: Unifying all symptoms (inflammation umbrella → I MADE) then find a center of gravity with 1 or 2 symptoms then Venn Diagram it.
  - Also think: what symptoms are new/most concerning?
- **Discoloration of urine:** endogenous vs exogenous pigments. Exogenous- beeturia. Endogenous- myoglobin, hemoglobin, RBC
- **Autoimmunity**: "autoimmune diseases run together". Baseline changes: patients have long standing symptoms which may or may not contribute to present illness.
- **Fever**: usually ill appearing patients, tachycardia, acute onset and course. Everything from this becomes "funky".
  - Faget sign: pulse-term dissociation - Legionella, Malaria, intracellular infections: Brucellosis, Tularemia, Chlamydia. Beta blocker use could also reduce tachycardia w/fever.
- **Pancytopenia**: destruction vs production.
  - Fever + Pancytopenia Venn Diagram:Infectious (Parvo, tick borne), Autoimmune, Malignancy.
- **Multiple CC but no DX?** Go back!
  - Review tests u already have + value necessity of future *invasive* tests.
  - Splenomegaly + LAD: WBC - Infectious (EBV, CMV, Syphilis), RBC- Splenic sequestration, Other - infiltrative.
- **EBV**: EBNA - chronicity. Why would we have chronic EBV? Consider immunodeficiency, lymphomas.
- **HLH**: Even if you dx HLH → look for underlying etiology.