11/26/21 Morning Report with @CPSolvers

***Case Presenter**: Lina Yagan (@YaganLina) **Case Discussants**: Rabih Geha (@rabihmgeha) and Reza Manesh (@DxRxEdu)*

CC: "A case that will send chills down your spine" - Back pain

HPI: 49 year old man w/o significant PMH, p/w 5 days of back pain that began suddenly, 9/10, in the R interscapular region w/ irradiation to the lower back. Not associated with movement, but with deep inspiration. Sweating 1 month prior to admission. Received symptomatic tx w/ partial relief. No recent travel, sick contacts, similar episodes or dx of muscular spasm. No loss of sensitivity, strength, constipation or urinary incontinence.

PMH: None

Meds: None

Fam Hx: No history of DM, HTN.

Soc Hx: Originally from Nepal, but lives in Qatar. Does not lift heavy objects.

Health-Related Behaviors: Exposure to unpasteurized milk. 1 cigarette per day.

Allergies: None

Vitals: **T**: 37.1 **HR**:88 **BP**: **RR**:16 **SpO_2**:
Exam:
Gen: No apparent acute distress.
HEENT: Palpable lymph nodes in the posterior cervical chain. No pharyngeal erythema. T5-T6 spine tenderness to palpation.
CV: Normal S1, S2.
Pulm: Normal vesicular sounds b/l.
Abd: Non distended, no tenderness, no organomegaly.
Neuro: Alert and oriented. 5/5 in all extremities. Normal reflexes, downward plantar reflexes.
Extremities/Skin: No pallor, cyanosis or jaundice.

Notable Labs & Imaging:
Hematology:
WBC: 20.8 (Neutrophils 52% Lymphocytes 18.9% Monocytes 5.1% Eosinophils 22.9%) Hgb: 8.3 (MCV 80 RDW 19.5) Plt: 332

Chemistry:
Corrected Ca: 10.12 PTH pending. Albumin: 2.4
Peripheral smear: Reactive lymphocytes. Ig Assay: Elevated IgG. RF, ANCA, ANA neg. Blood, stool cultures, TB Quantiferon, Brucella antigen neg.
Serum electrophoresis: chronic inflammatory response.
Imaging:
Thoracic spine X Ray showed no abnormalities.
CT Abdomen-thorax: Multiple abdominal lymph nodes. Lytic lesion in T2. Lytic lesions in the iliac bones.
MRI Spine: Diffuse patchy infiltrates in most vertebral bodies. Lymphadenopathy in cervical, supraclavicular and axillary groups.
Core Lymph node biopsy: TB PCR was neg. Preliminary pathology showed Non-Hodgkin's Lymphoma.
Final Dx: Probable Non-Hodgkin Lymphoma.

Problem Representation: 49M p/w acute onset back pain w/ a chronic course of constitutional symptoms. Cervical lymphadenopathy, hypereosinophilia was also noted.

Teaching Points (Rafa):

- **BACK PAIN FOR 5 DAYS**
  Most back pain in adults - benign
  Red flags: constitutional symptoms (fever, weight loss), age>50, cancer history. focal neurological deficits, no response to previous therapy, nighttime pain interfering with sleep, pain duration >1m
  ETIOLOGIES:
  Local processes:
  Osteomyelitis, epidural abscess - S aureus / Strep - especially in degenerative tissue / Gout, primary cancer, metastasis , herniated disc, osteoarthritis, spinal stenosis
  Pearl: bony metastasis include Prostate, Breast, Kidney, Thyroid, and Lung (Pb Kettle).
  Extra- processes
  Kidney, aorta, lungs, pericardial - extra-back processes
  Imaging is crucial - CT or MRI (neurological deficits)?
- **UNPASTEURIZED MILK** - brucellosis, Mycobacterium bovis - both can affect the bones - do not achor on that!
- **EOSINOPHILIA** -
  GI tract/ lungs/ skin/heart - most commonly organ infiltrated by these cells
  Staph / Strep less likely to be involved
  Primary - leukemia / secondary-EGPA, cancer, infections, allergy (atopy), AIN, DRESS
- **BONE LESIONS PATTERN WITH NEOPLASIA**
  Osteoblastic: prostate cancer, Hodgkin lymphoma, SCLC
  Osteolytic lesions - MM, NSCLC, melanoma, renal cell carcinoma
  Mixed: GI, breast