12/4/20 Morning Report with @CPSolvers

Case Presenter: *Gurleen Kaur (@Gurleen_Kaur96)* ***Case Discussants***: *Rabih Geha (@rabihmgeha) and Reza Manesh (@DxRxEdu)*

CC: 37M 5d with chest pain, SOB

HPI: Started spontaneously, worse with standing up, and positional. Worse in middle of chest. Sharp/tight in quality, no radiation. Intermittent diaphoresis. At baseline 5d ago, now cannot walk more than 5 feet without CP and SOB.

Lower back pain for couple mo, OSH eval, d/c on pain meds. Wound on back of R shoulder for 2-3 mo. No trauma, non healing for several mo, draining spont.

Denies palp, orthop, LEE, cough, N/V, syncope, WL/fever/chill/NS.

PMH: GERD

Meds APAP for pain

Fam Hx: DM2 father and mother, no hx cardio dz

Soc Hx: no tob

HRB: Drinks EtOH 3-5 d/week, no drug use

Vitals: **T**: **38.1** **HR**: **122** **BP**: **140/91** **RR**: **24** **SpO$_2$**: 97

Exam:

Gen: NAD, AO, appears tachypneic

HEENT: atraumatic, normocephalic

CV: reg rhythm, tachycardic, no M/R/G, no JVD, tenderness to chest wall palpation

Pulm: CABL, no wheeze, rale, rhonchi/ **Abd:** nl

Neuro: no focal deficits, back tender to palpation,

Extremities/Skin: no LEE, pulse nl b/l, large ulcerated area approx 8cm in diameter with fibrinous sloughing and various stages of granulation tissue, in R upper shoulder, 0.5 cm area of scab around area

Notable Labs & Imaging:

Hematology:

WBC: 9.6 (76 N, 13 L, 8 M) Hgb: 8.8 Hct: 28.1 MCV 86.5 Plt: 343

Chemistry:

Na: 138 K: 3.1 Cl: 102 CO2: 20 BUN: 28 Cr: 1.04 glucose: 108 Ca: 10.3 Phos: 3.9 Mag: 1.5 ; AST: 16 ALT: 9 Alk-P: 227 T. Bili: 0.6 Albumin: 3.4 Prot 7.3

Trop 0.02, Lactic acid 1.09, PT 18.9, PTT 43, INR 1.7, Fe 33, TIBC 186, %Sat 18, Ferritin 5790; VBG 7.45/31/54/21; UA- trace prot, 1+ ket, SG >1.030; hapto 689(H), D-dimer 2.05, Uric Acid 10.3, LDH 1618, HIV neg, Hep A/C- neg, Heb B- imm, TP 5.5. SPEP- mildly intense A2 band present, cannot exclude paraprotein, K 23, L 21, K/L nl. Urine K- 229, L 21, K/L nl. IgG 874, IgM low 33, IgA 166 (nl). Bcx/UCx- neg

Flow Cytometry- no aberrant clonal pop of cells, trace B cells, plasma cells, B2 microglob 4.114 (H)

Imaging:

EKG: sinus tach ; CXR: no acute intrathoracic abnl

CT Angio chest- no acute PE, limited study , scattered linear opacities in lung 2/2 atelectasis, SM, diffuse …

Lung perfusion study- no PE

CT AP- small pericardial effusion, HM- 20cm, Spleen 18x7x? cm . Mixed lytic/sclerotic diffuse abnl of bone density with focal mild/moderate biconcave deformity at L4. Echo- normal EF, no other valvular abnl

BM Bx: anaplastic large T-cell lymphoma, BM hypercellular, mult foci of abn lymphoid cells, PET Scan- increased uptake in cervical LN, abnl foci in mediastinum, spleen, liver, skeletal system, sternum, ribs, Asymm increased tracer in cut/subcut areas of R shoulder

Problem Representation: 37M with pmh non healing R shoulder ulcer p/w subacute chest pain/SOB with workup notable for lytic/sclerotic bony lesions, splenomegaly, elevated lactate dehydrogenase & final diagnosis c/w anaplastic large T-cell lymphoma.

Teaching Points (Sukriti):

Investigating the Sx: Chest Pain:

Step 1: Rule out emergent causes: 4+3+2: cardiac (ACS, AD, tamponade, takotsubo), pulm (PE, PNA, PTX), GI (esophageal rupture, impaction).

Step 2: Anatomical approach (outside-in): Skin, bones, mediastinum, lungs, heart

Layering on the atypical ulcer:

Identifying the atypical ulcer: features of typical ulcers: Venous, arterial or nerve related, location: lower extremities

Atypical ulcer-- Clues:Origin: chest wall → skin eg. Pleura: empyema necessitans vs skin → chest wall (spondyloarthropathies), mediastinitis, heart + time course (subacute/ chronic)

Collecting clues:

DDx: Infections (fungal), Malignancy, Autoimmune (spondyloarthropathies)

Bone lesions: Sinisters pathologies

1. **Malignancy**: 1 - (sarcoma)osteosarcoma, Ewing's sarcoma, chondrosarcoma, 2- metastasis (liquid - leukemia, lymphoma, MM vs solid - Breast lung prostate, thyroid)
2. **Infection:** TB, endemic mycoses (prioritise depending on geography). pyogenic osteomyelitis
3. **AI:** sarcoidosis, langerhans histiocytosis

CRP: Spleen: "allergic" to solid tumors except melanoma

Framing the hypothesis: Subacute inflammatory syndrome w/ thoracic Sx + skin + bone + spleen

Spleen + bone = liquid tumors; histo, TB>; sarcoid (lack of parenchymal signature?)

Testing the hypothesis: Clinical syndrome x base rate

LDH without an obvious source: **Malignancy! Lymphoma/ leukemia >**

Elevated uric acid - sequela of tumor lysis syndrome