03/19/24 Morning Report with @CPSolvers

***"One life, so many dreams" Case Presenter**: Tansu (@drtansue) **Case Discussants**: Alec (@ABRezMed), Austin (@RezidentMD)and Mengyu(@zhoumy07)*

CC: 22 y F w/ pain, redness, swelling in both hands PIF in 5th digits bilaterally.

HPI: 10 days after joint symptoms, 14 hour bus ride, she noticed she felt uncomfortable in her normal fitting pants, 3 days later after a 4 hour plane ride she developed facial swelling. During this time joint pain generalized to other digits and wrists lasted half an hour in the morning, noticed urine became darker, watery diarrhea no blood mucus, no N/V, cough with sputum production.

PMH: none

Meds: she recently used herbal supplement for 4 months, dropped 65kg (143 lb) to 56 kg (114lb) over past 9 months.

Fam Hx: Mother 50y.o (HTN 3 y), Father 55y.o (T2DM 10 y) / HTN(8 y), CAD,
2 older siblings with no PMH.

Soc Hx:
College student lives in dorm with 3 other female students.

Health-Related Behaviors:
Smoker (3 pack/year) no exercise, unhealthy diet/ not sexually active.

Allergies: NKDA

Vitals: T: 37.2 C, **HR:** 122, **BP:** 99/56, **RR:** 16, **SPo2** 98% RA.
Exam: Gen: appears well, no acute distress.
HEENT: oral mucosa pink and moist with good dentition, 2 oral ulcers (palate & buccal mucosa) well circumscribed w/ red atrophic center / face edematous compared to her old pictures.
CV: RRR, no murmurs, gallops, no JVD.
Pulm: breathing unlabored, breath sounds decreased in lower lobes.
Abd: non distention, no palpable mass.
Neuro: A&Ox3
Extremities/skin: 3+ pitting edema up to knees bilateral. Joint pain localized to hands.

Notable Labs & Imaging:
Hematology:
WBC: 6.3, Hgb: 7.5, MCV 76, Plt: 67000.
Chemistry: Na: 132, K: 5.6, BUN: 26, Cr: (1.45 → 1.75, bl 0.49) Ca: 7.3, total protein 5.5, Albumin: 2.1, CRP 3.14, ESR 76, D-dimer 3.21.
TSAT:12 %, ferritin 107, Folic acid 9, Vit B12 :115,TG 372, total cholesterol: 287, UA : protein(3+),RBC (113),WBC (48)/ 24 urine protein: 3.6 g. ADAMTS13 >80%.
direct coombs (+) indirect coombs(-)
C3: 43 (nl 80-178), C4: 4 (nl 12-42), Anti PR3 neg, Anti MPO neg,
ANA + titer 1:3200, Anti ribosomal P protein neg, nucleosome neg, Anti histone Ab neg, Anti-dsDNA pos. HIV & Hepatitis Neg,
She developed fever after hospitalization => Blood urine culture no growth.
Imaging:
Echocardiogram: no abnormalities
Chest CT: linear atelectasis inf L lower lobe, interlobular septal thickening in bl basal segment.
USG: kidney size increased to 12.5 cm and echogenicity of parenchyma (grade 1-2)
Biopsy kidney: glomerular mesangial and endocapillary proliferation, few PMN, hyaline thrombi, wire- loop lesion, fibrocellular crescents in 2 glomeruli, thickened balsam membrane focal atrophic tubules, fibrointimal sclerosis/ Direct IF: IC w/ IgA IgM C1q IgG C3 kappa and lambda deposits.
Lupus nephritis score: activity index 12/12, chronicity index 2/12

Dx: **diffuse proliferative and membranous LN** (class IV+V)

Problem Representation: 22 Y F with recent herbal supplement consumptions presents with systemic symptoms including anasarca, joint edema, morning stiffness and swelling and dark urine. Lab findings indicate anemia, thrombocytopenia and hyperkalemia, hypocalcemia and elevated CRP ESR with evidences of renal involvement with dysmorphic RBCs and proteinuria.

Teaching Points (Umbish):

- ★ **Polyarthritis-** inflammatory vs non-inflammatory
- ★ **Edema-** facial vs generalised- nephrotic synd. vs heart failure vs anaphylaxis
- ★ **Importance of timeline-** preceding events can indicate a trigger like a long bus ride
- ★ **Sexual history** very important- rule out STIs, hepatitis etc.
- ★ **Travel History:** A recent long bus ride or travel can be associated with increased risk of thromboembolism
- ★ Two types of swellings- **itis vs obstructio**n of blood flow
- ★ **Ddx:** exposure, thyroid, mixed nephritic-nephrotic,, infectious, drug induced lupus, SLE
- ★ Low platelets and anemia rule out MAHA always! (Mengyu)
- ★ Joint symptoms, renal involvement, hematologic abnormalities, and elevated inflammatory markers, make SLE a probable diagnosis. Confirmatory tests include: **ANA, anti-dsDNA, and anti-Smith** antibodies.
- ★ This case reinforces the importance of considering lupus in the differential diagnosis of young women with multisystem involvement, particularly when renal and hematologic abnormalities are present.