02/02/24 Morning Report with @CPSolvers

*"One life, so many dreams" **Case Presenter**: Samy Mady (@samymady12) **Case Discussants**: Rabih (@rabihmgeha) and Reza(@DxRxEdu)*

CC: 25yoF w/ fatigue for 2 months and exercise intolerance
HPI:
25yF w/ fatigue for 2 months and decrease in physical performance while running.
Normally she is an avid runner, but for the last 2 months there was a decline her exercise capacity. She says that she just felt weak.
ROS (-): preceding illness, weakness, cough, B-symptoms, leg swelling, rashes, nausea, vomiting, joint pain, diarrhea/constipation, dysuria
ROS (+): Occasional holocephalic headaches, **4 weeks ago** tick on the right knee with no rash afterwards, insect bite **2 weeks ago** on R forehead with redness and swelling; menstrual cycle irregular

PMH:
None,
No recent dental procedures

Meds:
None

Fam Hx:
None
Soc Hx:
Student in Graz
Health-Related Behaviors:
No drugs, no smoking,
not sexually active
occaccisional contact w/ neighbours cat

Vitals: T: 37.8 °C **HR:** 84 **BP:** 115/55 **RR:** 17 , Spo2 97%, BMI 23
Exam: Gen: AOx4
HEENT: no LAD, good dental status, no meningismus, no neck tenderness
CV: normal, no murmur, no JVD
Pulm: CTAP, no crackles; **Abd:** soft, non-tender, no fluid wave
MSK: No jaundice, rashes, edema, joint swelling, axillary or inguinal LAD, pulses normal

Notable Labs & Imaging:
Hematology:
WBC: 10.4 (normal diff) Hb 10 (MCV: 72), Platelets: 700 G/L, Retics: 1.8, RDW: high
Chemistry:
Na: 141 K: 3,9 Cl: 104 HCO3: 25 BUN: 15 Cr: 0.7 glucose: 110 Ca, Phos wnl
Liver enzymes, LDH, coags, uric acid wnl, albumin: 4, total protein 7,2
CRP 112 (ULN 5), ESR 120, UA: no proteinuria or RBCs, bHCG: neg, CK normal
Trop/NT proBNP wnl, Fibrinogen 7.3 (high), IL6 26 (high), Iron 17, Transferrin high, TSAT 6%, Ferritin 180, TSH wnl,
SPEP: increase in a2-Globulins but no monoclonal gammopathy, FLC wnl, immunofixation wnl
ANA: 1:160 (fine-speckled), anti dsDNA 12 (<10, borderline pos.); RF, ANCA, IgG, IgM,C3, C4 wnl; Quantiferon and Calprotectin neg., 3 sets of BCx neg
HIV neg, CMV; VZV; EBV; Influenza, Coxsackie, Brucella neg, Bartonella pos 1:180 (normal: 1:128)
CK normal, Myositis panel wnl
Imaging:
EKG: normal SR; CXR: wnl, Abd US wnl
PBS: hypochromia, no abnormal cells, flow wnl
TTE neg, MRI brain, neck, thorax and abdomen wnl, TEE normal
6 day course of azithromycin -> no effect, ex juvantibus ceftriaxone (minimal improvement), high dose of prednisone was given and CRP decreased to 20, ESR to 50, patient was better and discharged w/ 25mg of prednisone
Follow up 14 days later: Bartonella titer equivalent to before, CRP again 90, ESR 100, patient feels weak, gets predni again, started on MMF, no new symptoms, CRP fluctuating
1 month later despite IS persistent severe inflammatory syndrome with relatively good condition (BSG 100, Hb 9.7)., 6 weeks later patient developed 2 days of paresthesia and dizziness (attributable to physical overload after neuro assessment - trained the day before with a punching bag), LP wnl, all rheumatology work up remained neg. Paresthesia disappeared. Anakinra was started with no effect.

PET-SC: glucose up-taking nodule in right adductor loge (compatible with a tumor of mesenchymal origin)

Dx: Angiomatoid fibrous histiocytoma on the right upper leg (soft tissue/low grade tumour) - biopsy diagnosis

Problem Representation: A 25yF w/ fatigue and exercise intolerance for 2 months w/ irregular menstrual cycles. Labs notable for ACD and IDA, thrombocytosis, high inflammation markers (ESR, CRP, IL-6). PET-CT showing glucose uptake of a nodule in R adductor loge. Pathology compatible w/ mesenchymal tumor.

Teaching Points (Kuchal)

1. Performing Walk test to assess patients exercise intolerance
2. Heart/Lung/haematological /Body habitus are important to be considered for Dyspnea
3. If there's no significant findings on cardiopulmonary exam, r/o false negative
4. Pulmonary hypertension; isolated diaphragmatic weakness, coronary vessel disease are difficult to assess on PE.
5. Hb: compare to the prior Hb; Recheck with patient (F) Menstrual history. Infer from Lab values taking into consideration of the physical symptoms and examination
6. High ESR/CRP points towards inflammation.. Subacute/ Chronic process..First rise in IL6, CRP, ESR.
7. High IL6: ?Castleman's disease
8. Microcytic Anemia:TAILS mnemonic: Iron/ ACD/Thalasemia/ Lead/ sideroblastic anemia. Consider further testing Iron studies, lupus test.
9. Peripheral Smear: Hypochromic cells. Pencil cells. Ferritin low - Iron def if Ferritin is high- Consider other Iron studies.
10. Malignancy/ infection/ Autoimmune diseases cause Anemia of chronic disease.
11. Anemia, Iron deficiency & signs of inflammation of unknown origin in young women- Pan scan, Pregnancy test. HIV test. Family history.
12. Also repeat iron studies, follow the patient over time will help to diagnose the condition
13. MRI/ PET CT (better) to search occult Lymphadenopathy.
14. If LDH is high- think of doing skin biopsy
15. Ongoing inflammation, it can be the most important cause of the pathological findings in the patient.
16. Subacute inflammation (RLR schema) : Cardiovascular: Infections/ Autoimmune/ Cancer0 Muscle pathology.
17. PET scan: Angiomytoid fibro histiocytoma : Low grade tumor, low risk of metastasis. Is age <3 years, with fever, anemia, weight loss. Treatment is : Surgery. It cures it completely.