2/24/26 Morning Report with @CPSolvers

"One life, so many dreams" ***Case Presenter****: Samy (@samymady12)* ***Case Discussants****: Ravi (@rav7ks) & Kirtan (@KirtanPatolia)*

https://clinicalproblemsolving.com/present-a-case/

Scribing (Sarah B)

CC: 21-year-old female with **progressive diffuse joint and muscle pain**

HPI:

She noted **pain in her hips, wrists, and ankles** for two to three days. She also notes **odynophagia** and is unable to fully open her mouth. She also notes **rash** on trunk and upper extremities.

ROS: Negative for joint swelling, pain, dyspnea, chest pain, syncope, fever, rigors, dysuria, abdominal pain, headache. Normal bowel movements and appetite.

PMH:
Secondary steroid resistant nephrotic syndrome (2014) bx proven **FSGS**
Treated with CsA, CYP, MMF, rituximab, flare 4 months ago -> 0,5g 4 months, 1g 10 days ago
Mycoplasma PNA 1a ago
2°Hypogammaglobulinemia
Vaccinations up to date

Meds:
Rituximab 1g (10d ago)
IVIG every 4 wks
ACE inhibitor
Furosemide PRN

Fam Hx:
Idiopathic nephrotic syndrome, epilepsy
Type 2 DM

Exposure Hx:
Recent dog exposure (no bites/scratches)
Monogamous with boyfriend using protection
Beach vacation in italy.
Student
Forest walks, no insect bites
No drugs / smoking / EtOH

Allergies:
No allergies

Vitals: T: 36 C **HR**: 89 **BP**: 115/70 **RR**: 16 **Sat**: 99% on RA **BMI**:
Exam: Gen: awake, AO x 4, mild distress, normal nutritional status.
HEENT: anicteric, **pharyngeal erythema** and **tonsils with white exudate**, no Koplik spots. Able to **open mouth 2 cm**. BL **painful cervical LAD,** mobile LN. No meningismus. Midline trachea
CV: nl **Pulm**: nl **Abd**: nl **Neuro**: nl
Extremities/skin: mild **tenderness to palpation** of wrists and fingers MCPS and PIPs without erythema or swelling. Fine maculopapular rash on trunk and UE. No signs of peripheral emboli, no LE edema.

Notable Labs & Imaging:
Hematology: WBC: 15.5→16.2 (13.4K N 0.9 L, lymphopenia) Hgb: 15.4 MVC 94 Plt: 166
Chemistry: Na: nl K: nl HCO3: nl Cr: nl LDH 300 ferritin: 250 CRP: 15 -> 400 LFTs: nl procal: 0.11 → 9.3
COVID, flu, RSV, strep: neg **UA:** 3+ protein, no blood.
CXR: No infiltrates, no signs of congestion, no osseous, abnormalities. **EKG**: normal sinus rhythm
POCUS: no thrombosis of jugular veins, no soft tissue swelling. Reactive LAD. Thyroid nl.
Given IV acetaminophen and discharged. Re-presented to ED 6 hours later with progressive joint pain in all joints. Severe pain despite medication.
Repeat Exam: **Vitals**: **HR 124,** otherwise unchanged
Extremities: **Diffuse tenderness of all joints with limitation of ROM** and no swelling or erythema.
Skin: **maculopapular rash** on trunk and UE.
Blood cx drawn, started on pip/tazo, Required opioid pain management 2/2 refractory joint pain.
Advanced Labs:
HIV, hepatitis, legionella, pneumococcus UAg negative.
ACR 4.6, PCR 5.1 g/g, **alpha-1 and b2 microglobulin slightly elevated, microscopy with Maltese crosses,** but otherwise unremarkable.
CD19+ 59 (61-415). ANA, ANCA, RF, anti-CCP, HBV, HCV serology negative. IgA 0.1 (0.7-4), IgG 5.7 (7-16), IgM 1.4 (0.4-2.3), free light chains unremarkable.
PCR (blood): adenovirus, CMV, EBV HSV, VZV parvovirus B19, HHV-6 negative. PCR throat: rhinovirus +
ABD US: negative.
TTE: unremarkable, no endocarditis.
On detailed questioning patient reported three prior similar episodes of polyarthralgia, rash, fever each occurring 6-10 days after rituximab administration. **C3c 1 (0.9-1.8), C4 0.07 (0.1-0.4).** *Blood cultures with no growth and continued daily fevers and rise in inflammatory markers. Serum sickness diagnosed and rapidly responsive to steroids.*

Dx: anti-rituximab IgG 1:210 → Rituximab induced serum sickness (RISS) with incidental rhinovirus pharyngitis

Problem Representation: 21-year-old female with hyperacute progressive polyarthralgia, myalgia, fevers, and maculopapular rash in the context of rituximab treatment found to have negative infectious and autoimmune serologies, positive inflammatory markers, and low C4.

Teaching Points (Eugene)

Polyarthralgia/myalgia/rash:
-Etiology: Exogenous(viruses, drugs) vs endogenous (autoimmune).
-Pathology: Innate vs acquired immune phenomenon

Odynophagia: Etiology: esophagus, structures in the oral cavity, pharynx

Background:
-Immunocompromised state (Nephrotic syndrome with hypogammaglobulinemia and hypocomplementemia as cause of current presentation or innocent bystander?).
-Patient is vulnerable to EBV, CMV, Parvo B19, HIV, Hep B, C, fulminant bacterial infections or rare malignancy
-Rituximab (chimeric monoclonal antibody) causing serum sickness?

Exams:
-Pharyngeal inflammation with exudate with LAD: endogenous (autoimmune), exogenous (viral, STIs), rare (lymphoproliferative)

3 buckets to consider in illness script
Infectious vs autoimmune vs drug reaction : thoroughly rule out other etiology (cultures, PCR, ferritin, LDH, serologies, imaging) and then consider drug reaction.

Fun fact: Serum sickness causes TMJ arthralgia should help support thought process.