01/17/25 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: Jeffrey Shen discussants: Reza (@DxRxEdu), Rabih(@rabihmgeha)

Chief Concern

21y female with asthma & chronic urticaria for 2 years, now at rheumatology clinic for recurrent sinusitis & lymphadenopathy.

- 2 years of progressively worsening pruritus, with hives appearing afterwards

Review of Systems

- Chronic fatigue recently worsening.
- Some rash that looks like vasculitis on the legs, worse in the sun.
- Intermittent abdominal pain.
- No arthritis, weakness, hematuria/hemoptysis, neuropathy or documented fevers

Past Medical History

Congenital ichthyosis as a child (resp failure that resolved) with chronic thickened skin
ADHD
GERD
Post nasal drip with septal deviation
Asthma

Fam Hx: Not relevant
Soc Hx: Student in healthcare. No pets, exposures, insect bites
Health-Related Behaviors: None. Monogamous w/1 partner. No travel
Meds: PPI, Albuterol, Antihistamines. Adderall

Exam: General: Fatigue. *Non-tender* Axillary + inguinal lymphadenopathy.
HEENT: Tender sinuses. No nasal/oral ulcers **CVS:** Normal **Resp:** Mild exp wheezes. No respiratory distress **Abdominal:** SNT. No masses.
Derm: Diffuse, symmetric skin thickening: worse on forearms, groin, axilla, *especially at the creases*. Urticarial rash on back, right arm and upper breasts. No purpura/petechiae or vasculitic rash
MSK: Normal.

Notable Labs & Imaging:

Hematology:
WCC 12, 35% eosinophilia, 17% lymphocytes. Plat 304. Hb 14.
Chemistry
Na 137, K 4.3, 26 bicarb 26, bun 9, 0.7 creat. Albumin protein 9, tbili 3, ALT/AST 30s, ALP 82. HGT 104,
Urine: UPCR negative. Utox negative.
Micro: *Negative* Blood, sputum, urine cultures. HIV, syphilis, hepatitis, histoplasmosis, cocci, blasto, Strongyloides and TB all negative.
Autoimmune: ANA 1:160, negative anti-Smith/dsDNA. C3 84, C9, both borderline low. ANCA: both MPO and PR3 negative. RF/Anti-CCP: Negative. ESR 40. CRP: 1. IgG4 1055 with total IgG 2785 IgE: 2620.
Imaging: **CT Chest, abdomen and Pelvis:** Normal besides bilateral axillary/inguinal lymphadenopathy.
Tissue Biopsy
Sinus: Chronic sinusitis. No severe eosinophilia/igG4 infiltration. **Bone Marrow:** hypocellular, eosinophilic hyperplasia. No blasts, no atypia. Normal flow cytometry. FISH & cytogenetics: negative **Lymph node:** Reactive follicular hyperplasia. Nodular architecture, mixed infiltrate in the paracortex, eosinophilia. No atypical cells. Mild IgG4 increase
Flow cytometry negative. **Genetic Sequencing**: Mutation -SCL27A4 positive.

Final Diagnosis: Congenital ichthyosis prematurity syndrome

Problem Representation: 21yo female with hx of severe atopy, now w/*extreme eosinophilia* found to have negative infectious workup, ANCA, and tissue biopsies, with genetic sequencing confirming the diagnosis of *congenital ichthyosis prematurity syndrome*

Teaching Points (Gerardo):

Recurrent sinusitis/urticaria: no clear explanation, can indicate systemic disease (+ generalized lymphadenopathy) if localized: reactive vs tumoral
Urticaria: elevated rash that gets away after hours, if its PERSISTENT then we should raise the question: common vs vasculitis.
Asthma + sinusitis + urticaria = is it a syndrome?
Asthma, if accompanied by destruction of tissues: is it sinister?
Ichthyosis is a thickening in the skin: can be congenital, HIV, Hodgkin, sarcoid, nutritional
Lymphadenopathy without focal source: can be metastatic (unlikely, no solid focus)

- Sarcoid, SLE: non radiographic

SLE 101: ANA + serum protein electrophoresis
Eosinophilia: low level (non concrete) vs over 5000 (severe)

- + Lymphadenopathy: are they infiltrating organs or not
- Infiltration is mainly in organs exposed to outside the body (where they cause damage)
- Is damage due to what's driving the eosinophilia or eosinophils?
- Ddx: DRESS, AIN, drug-induced, infection (serological), mycosis fungoides/lymphoma, EGPA (middle age, fingerprint in lungs, kidney)
- Important: ruling out possible causes
- Ultra cryptic: idiopathic, autoimmune, cancer

Bone marrow biopsy negative diseases:
IgG4 disease: IgG4 gives no diagnostic yield in itself.
Dx: congenital ichthyosis prematurity syndrome (eosinophilia + ichthyosis) is a complex genetic syndrome,: no known effective treatment, EGPA can be a Ddx