8/19/26 Morning Report with @CPSolvers

"One life, so many dreams" ***Case Presenter****: Evan* ***Case Discussants****: Sharmin & Reza*

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

Scribing (Bayan):

CC: 14 year old male, Routine labs revealed → Cr 1.57, WBC 19.3, PLT 529, serum Tacrolimus level of 14.3 which prompted referral to ED.

HPI: 3 days of fever, Tmax 39C, fatigue, sleepy, generalised abdominal pain, poor appetite
Seen by Ortho for intermittent left foot pain, no focal findings .. suspected Sever disease

ROS: 12 lb weight loss over 2 months
No diarrhea, no swellings noted

PMH: ESRD due to b/l renal agenesis, s/p deceased donor renal transplant → 3 x antibody + cell-mediated rejection, last 2 years ago → Rituximab + plasmapheresis + IV IG → rejection controlled

Crohn's disease
HTN, Motor ticks

Meds: Tacrolimus, MMF, prednisone, humira, atenolol, cholecalciferol, simvastatin

Fam Hx: adopted

Social Hx: lives on farm with family

Health-Related Behaviors:

Allergies:

Vitals: T: 98.1 **HR**: 85 **BP**: 126/90 **RR**: 22 **Sat**: 99% **Weight**: 50.5kg (from 56.2kg 2 months ago)
Exam: Gen: no acute distress, cooperative
HEENT: wnl **CV**: RRR, wnl **Pulm**: wnl **Neuro**: wnl
Abd: soft and lax, not distended, non-tender, well appearing renal transplant scar
Extremities/skin: no rashes, bruises or lesion. Left foot in a boot →
swelling and ecchymosis, fluctuant, Minimal ROM due to pain



Notable Labs & Imaging:
Hematology: WBC: 19.7 (Neutrophil predominant) Hgb: 11.1 Hct 36.9 Plt: 553 MCV: 87
Chemistry: Na: 137 K: 5.1 Cl: 107 BUN: 43.3 Cr: 2.06 (baseline of 1, 2 weeks ago) Glu: 117
UA unremarkable
Joint aspiration: purulent, blood-tinged, Gram stain: Possible blasto, 4+ WBCs predominant PMNs
Imaging:
Renal US: mildly increased echogenicity, mild pelviectasis of upper pole, patent vasculature
X-ray left ankle: ankle soft tissue swelling, vague area of lucency in calcaneus
MRI ankle: soft tissue infection of hindfoot, calcaneal osteomyelitis,
subQ tissue edema, possible fungal infection
CXR: extensive micronodularity, trace patchy consolidative opacities,
suspicious for miliary blastomycosis
MRI Kidney: no renal involvement
MRI Brain: no CNS involvement



Rejection labs: minimally elevated, no acute rejection
CRP 217 ESR 87
Blood Cultures: negative
Pt underwent Left ankle debridement and washout →
- Fungal cultures: positive for blastomycosis
- Urine Blasto Ag: positive





Dx: Disseminated Blastomycosis.

Pt received liposomal amphotericin B. Creatinine continued trending up. Ampho B discontinued, Itraconazole started.

Kidney biopsy: acute tubular necrosis.

Problem Representation: 14 y/o male k/c Crohn's disease, ESRD S/P renal transplant on immunosuppression p/w fever, fatigue, abdominal pain & left foot pain

Teaching Points (Mitch**)**

- Tacrolimus: Calcineurin INhibitor
- Solid organ transplantation rejection medication (Kidney + Liver)
- Immune Modulator → Decreased T-Cell activity
- Side Effects: Nephrotoxicity, diabetes, neuropathy

- Initial labs show inflammation: increased platelets, increased WBC. Consider infection in an assumed immunocompromised host or hematologic malignancy

-**Immunocompromised Host:** Full body infectious workup
- Given history of rejection, important to rule out an invasive infection before giving additional rejection medications

- **AMS: Sleepiness**
- Worried about either a secondary fatigue 2/2 infection elsewhere in body, or a primary encephalitis/CNS infection

-**Medications:** Tac, MMF, Pred, Humira
- T and B cells both inhibited. TNF inhibited, at risk of granulomatous infections/malignancies

- Physical Exam Localization: Unsure how well an exam could localize/trust a normal exam in a pediatric + immunocompromised patient

- Painful ROM of joint → Infectious vs Crystalline
- Sample fluid → culture, crystals, PMNs
- Fever + Leukocytosis = r/o septic joint (staph, strep, gonorrhea base rate… broader here given immune status)
- BCx to evaluate disseminated bacteremia

- Don't immaturely anchor on fungal from initial culture. Consider keeping antibacterials for superimposed infection
- Miliary Lung XR pattern: suggests hematogenous spread from mycoplasma or fungal organisms