02/20/25 Morning Report with @CPSolvers

*"One life, so many dreams" **Case Presenter**:Noah Nakajima(@Noah_Nakajima) **Case Discussants**: Rabih Geha(@rabihmgeha), Marcela (@Marcelaaos)*

CC: 30F presents to ED with **fevers for 5-7 days**

HPI: Feeling feverish for one week, with **arthralgias, headache, and flu like Sx**. After transplant was found to have **donor specific antibodies** (concern for amnestic post transplant response) s/p IVIG, steroids, Thymoglobulin, rituximab + plasmapheresis.

ROS: Feeling good overall. No headache with movement, no cough, no SOB. Has moderate rhinorrhea.

PMH:
HFrEF,
SLE (complicated by ESRD -> **renal transplant 2 mo ago**).

Meds:
MMF
Prednisone taper
Tacrolimus
Bactrim
Valacyclovir
(donor CMV+)

Fam Hx:

Soc Hx: Kids at home

Health-Related Behaviors:

Allergies:

Vitals: T: afebrile **BP:** 110/80 mmHg **RR:** normal **HR**: 110 bpm **Sat:** normal
Exam: Gen: uncomfortable **HEENT:** normal **Neck**: normal
CV: normal **Pulm:** normal **Abd:** normal
Neuro: normal **MSK:** arthralgia sites were not arthritic

Notable Labs & Imaging:
Hematology:
WBC: 0.9 (0.6 neutrophils, 0.1 lymphocytes)
Hgb: 8.1 (close to bl) **Plt:** 69 (bl 150, month ago)
CMP stable. **LDH**: 752. **Ferritin** 10 000 -> 16 000 next day.
Reticulocytes: Elevated, **Haptoglobin**: undetectable
Peripheral blood smear: no schistocytes, no blasts, toxic granulation of neutrophils, evidence of marrow stress. C3, C4, UA: Wnl.
-> started on broad ABx for neutropenia + doxycycline + G-CSF.

Imaging: CT contrast Abdomen: **bilateral enhancing renal masses suspicious for RCC (in native kidneys)**, moderate splenomegaly, no LAD, no pulmonary changes, no fat stranding. **PET:** hypermetabolic BM (done after G-CSF).
BM biopsy: hypocellular BM, no monoclonality, no blasts, rare cells compatible with hemophagocytosis, cytogenetics negative. Infection work up: HIV, HBV, HCV, EBV, CMV, BC, RMSF, Ehrlichia, Heartland, Bourbon, HSV, Cocci, Blasto, Toxo, Bartonella, Histo, Parvo negative. Stool C&G, O&P negative.

-> improved after a week, but soon after presented with the same Sx (treated with empiric ABx, steroids). Spleen biopsy: unrevealing, extra BM hematopoiesis.
-> Represented 12 days after discharge. -> anakinra -> tocilizumab (worsening thrombocytopenia) -> rituximab for possible ITP (worsening leukocytosis).
New lower lobe infiltrate, wedge shaped spleen infarct. New PET: multiple LN (reactive), periportal LAD. Biopsy nondiagnostic. Back pain -> **MRI** (enhancing foci in vertebral bodies, mild edema interspinous processes). **Spleen genetics:** positive for Bartonella. **Positive Bartonella blood PCR.** Echo clean -> started on doxy.

Dx: invasive bartonellosis.

Problem Representation: 30 year old female with Hx of SLE, ESRD and recent renal transplant complicated by presence donor specific antibodies came to the ER with a week-long fever and pancytopenia.

Teaching Points(Sawsan):
Approach to CC:
- ➔ Fever vs hyperthermia
- ➔ IMADE mnemonic (infection, malignancy, autoimmune,drugs, endocrine)
- ➔ Look at associated sx ,time course, exposures & assess immune status and know your host.
- ➔ Dysfunction vs stable : is the patient able to walk,eat, and talk.

Wrokup
Workup in immunocompromised is analogous to immunocompetent but differs in 2 things:
1) Range of possible viruses is much broader , including viruses not localizing to a specific mucosal site like CMV and BK virus(blood borne viruses)
2) Absence of focality doesn't always rule out the possibility of a focal infection > lean on radiology

➔ **Renal masses in a patient with hx of renal transplant:**
Transplanted kidney> can have microscopic tumor and in cases of immunosuppression is blossoms and grows (donor derived cancer)

CANCER VS INFECTION
- ➔ **Fever + intravascular hemolysis**: test for babesiosis and malaria
- ➔ Inflammatory hematological w/o lymphadenopathy > think about castleman disease .
- ➔ Most causes of hypocellular BM are extrinsic
- ➔ Transfusion related GVHD > T cell having high troposim to the BM causing cytopenia.