05/13/24 Morning Report with @CPSolvers

***"One life, so many dreams" Case Presenter**: Amal Naji (@amalnaji495)* ***Case Discussants**: Seyma (@seymss15) and Kirtan (@KirtanPatolia)*

CC: Right sided abdominal and neck pain

HPI:
60y male w/ worsening abdominal and neck pain for one week. Also reports abdominal wall swelling.

ROS (+): fatigue, headache, right-sided tremors, coordination problems when walking

ROS (-): fever, chills, cough, vomiting, diarrhea

PMH:
Heart transplant for amyloidosis
CKD

Meds:
Torasemide
Tafamidis
MMF
Prednisone
Tacrolimus

Fam Hx:
Heart disease (mother)
Hypertension (father)

Soc Hx:
Smokes cigarettes, no substance/alcohol use

Health-Related Behaviors:
Works in Health Care

Allergies:
No known allergies

Vitals: T: 99.8 **HR:** 114 **BP: 138/80** **RR:** 17 **SpO2:** 100%
Exam:
Gen: Ill appearing
HEENT: Normocephalic, dry mucous membrane
CV: RRR, no murmur
Pulm: nl
Abd: 3x2 cm right flank swelling with erythema
Neuro: 4/5 throughout extremities, 3+ reflexes, ataxia in RUE/RLE
Extremities/skin: Unremarkable

Notable Labs & Imaging:
Hematology: WBC: 19.100 Hgb: 8.3 Plt: 418
Chemistry: Na: 133 K: 4 Cl:1.01 HCO3: 24 BUN: 34 Cr: 1.75 (baseline) glucose: 88 Ca: 8.4 Mag: 2; AST: 63 ALT:17 Alk-P: 78
Albumin: 2.6
GFR: 48, Troponin: 4; HIV: negative
Imaging:
CT abdomen: 4 cm right lower lobe mass, 3.7 mass right abdominal wall muscle, 3.7 lesion inferior right hepatic lobe + 2 subcentimeter lesions
CT chest: 4x4 cm RLL mass, areas of GG attenuation
CT head: Multiple enhancing lesions concerning for metastasis and/or septic emboli
LP: Gluc 85, protein 243, colorless, nucleated cells 165, RBCs 2993, Neutrophil 71%, lymphos 8%, monocytes 21%
Urine Histo neg, AFB neg
BAL: 100 ciliated epithelial cells, 3 eos, lymphos 18, neutrophil 64, squamous cells 12; amyloid deposition and areas of necro purulent debris
CSF culture: acid fast bacilli (nocardia)
Dx: Disseminated nocardiosis

Problem Representation: 60M with CKD and h/o heart transplant on immunosuppressants presenting with neck and abdominal pain, associated w/ headache and focal cerebellar deficits. Labs significant for leukocytosis, hypoalbuminemia, and multiple liver, brain, and abdominal wall abscesses found on imaging.

Teaching Points (Ximena):
We can approach the case as two separate problems first.
Abdominal pain: VIPO mnemonic → Vascular, Itis, Perforation, Obstruction.
-Important to rule out life threatening causes (vascular)
-Identify origin of the pain: Is it coming from the abdominal wall or deep inside?
Neck pain + coordination problems:
-Movement problems point to basal ganglia & cerebellum
-Short time course: infection, toxic and metabolic
Medication Pearls:
-Tacrolimus is calcineurin inhibitor. Side effects: cerebellar toxicity (tremors, ataxia) & renal toxicity. Predisposes to T-cell defects (HIV, listeria, legionella, nocardia)
-The ataxia is usually diffuse w/medication toxicity but the exception: metronidazole
-Medications can immunosuppressed patients, so consider atypical infections (endemic mycoses, TB, crypto, histo, actinomyces, nocardia)
Physical Exam: Localize manifestations: in this case → SS & SC tissue
-Immunocompromised patients can lack fever, so it doesn't rule out infection.
-Infectious processes can can hematogenous spread to CNS, which could cause focal manifestations.
-Skin breakdown→ Concern for necrotizing infections? If not, SC infections (abscess)
Labs & Tests:
-Low albumin: PLE, liver & kidney disease, inflammation (acute phase reactant). Edema can point to organ pathology, instead of inflammation.
-LP analysis: opening pressure & cell count -neutrophilic pleocytosis: bacterias, amebas (neglearia, acanthamoeba), atypical bacteria (nocardia)
Try to be specific to get the diagnostic tests when dealing with atypical organisms because they might be difficult to identify in regular diagnostic methods.
More Pearls:
Pulmonary-CNS syndromes: neutrophil defects, B cell defects, T cell defects, infection (nocardia)