10/18/21 Morning Report with @CPSolvers

***Case Presenter**: Amanda Barreto (@amandabarretof2) **Case Discussants**: Dr. Laila Woc-Colburn (@DocWoc71)*

CC: Seizures for half an hour

HPI: Previously healthy 26 year old woman w/o PMH comes to the ED brought by her mother because of transitory LOC for 30 minutes associated with a tonic-clonic seizure. Refers intense holocranial headache, w/o improvement, no aggravating factors. Improved w/ symptomatics. 12 days of paresthesias on lower limbs. Recent unintentional weight loss.

A new episode of seizure during the PE that resolved w/ benzodiazepines.

PMH: None

Meds: None

Fam Hx: None

Soc Hx: No tobacco. Sexual worker.

Health-Related Behaviors: None

Allergies: None

Vitals: BP: 110/80 HR: 82 RR: 20 SpO2: 96 Afebrile

Exam:
Gen: well appearing, oriented.
Pulm, CV and Abdominal exams were normal.
Extremities: w/o edema.
Neuro exam was normal.

Notable Labs & Imaging:

WBC: 3 330 Hb: 7.9 Plt: 180 000
CD4+ 130

BMP: Na: 140 K: 4.0 Urea: 28 Cr: 0.9

HIV +

Contrast CT Head: Ring enhancing lesion in the parieto-temporal area with periedema.

CSF: Mild pleocytosis.

Toxoplasma gondii IgG +

Final Dx: Cerebral Toxoplasmosis
Tx was started w/Sulfadiazine, pyrimethamine and folinic acid w/clinical improvement.

Problem Representation: 26yF w/ new onset seizure is diagnosed with HIV/AIDS and multiple ring enhancing brain occupying lesion.

Teaching Points (Maria)

- **Seizures:** Infectious vs non infectious (look for risk factors, PMHx, associated signs/symptoms).
  - Infectious: bacterial meningitis, viral encephalitis (HSV, HZV), parasites (#1 cause world wide: NCC), fungi, mycobacterium.
- **Risk factors:**
  - Always rule out HIV. Common infections are still common in HIV+ patients but also have to think of opportunistic infections. Space occupying lesions: Toxo, TB, Chagomas. Also rule out other STIs.
  - South America: common fungi - Paraccocidio, Crypto, Histo.
- **Physical Exam clues:**
  - Don't expect fever in an immunocompromised patient.
  - Space occupying lesion in spinal cord: think UMN signs, paresthesias.
  - AIDS clues: Look inside the mouth: thrush (can be white/red → so painful can cause anorexia), Kaposi lesions, ulcers. LAD, temporal wasting (chronic condition). Apathy, fatigue.
- **Clues in Labs:**
  - Anemia may be a sign of chronic inflammation. With low WBC you can estimate CD4 count by looking at lymphocyte count. If pancytopenia think of bone marrow infiltration, if PLT are nl then this is ruled out.
  - CD4 gives perspective of what opportunistic infections predominate. CD4 100-200: Toxo, Crypto, TB. CD4<50: CMV, MAC. NCC, syphilis can affect immunocompetent patients
- **Ring enhancing brain lesions in patients with AIDS:** Toxo (Most Common!), Chagoma, Crypto, DLBCL - EBV, Nocardia (Bactrim prophylaxis covers this, but think about it especially for transplant patients). In patients with AIDS you can have multiple opportunistic infections.
- **Toxoplasmosis:**
  - In resource limited settings (CT scan, biopsy) you can treat Toxo empirically : Sulfadiazine/Pyrimethamine or Bactrim in high doses. In 48h symp. disappear if correct dx. Wait 2w for ART so pt tolerates meds.
  - CSF pleocytosis can be explained by HIV virus.
  - If Toxo IgG positive but no improvement with treatment then additional tests are needed. Toxo IgG and IgM are good predictors for reactivation.
- **IRIS**: Wait 6 weeks for CMV retinitis and encephalitis and cryptococcus before ART. As they are affecting closed structures you want to avoid an acute pressure increase.
  For TB CD4 <50 delayed ART increases mortality, for CD4>200 can wait.