07/27/21 Neuro Morning Report with @CPSolvers

***Case Presenter**: Franco Murillo(@FrancoMurilloCh) **Case Discussants**: Mario Suito (@mariosuitofmd) and Hannah Beaman*

CC: Incoherent speech, wet her bed

HPI: 18F went to ED where she presented hallucinations (small arms and spiders). Normal status the night before.

Denies: Fever, involuntary movements, N&V, loss of consciousness.

ED: Diagnosed with tonic clonic seizure → sedated → ICU

PMH: Left suprarenal adenoma, PCOS, hypothyroidism

Meds: Levothyroxine, metformin

Fam Hx: Hypothyroidism, grandmother goiter

Soc Hx: From Bolivia (jungle). Living in Peru previous 4y. Pilot student. Recent travel to Miami. Sleeps late at night (3 am).

Health-Related Behaviors:

Allergies:

Vitals: **T**: 37.5 C **HR**: 140 **BP**:130/60 **RR**: 21 **SpO_2**: 98%

Exam:

Systemic: Non pallor, aninteric. Tachycardic, no murmur.

Neuro

- **Mental Status**: Disoriented
- **Cognitive:** Mild acalculia
- **Cranial Nerves**: Mydriasis. Tongue tremor
- **Motor**: Tremor both hands.
- **Reflexes, sensory, cerebellar**: Normal

Notable Labs & Imaging:

Hematology: Hb 12, MCV 83.5 MCH 33, Leukocyte 7370 Lymphopenia (mild).

Chemistry: Glucose 206 on admission → ICU 52. K: 3.3 Phos: 2.38 Na: 138, ionized Ca: 1. 140 ALT, AST and T. Billi: Nl. B12 and Folic acid: Nl. ESR: 9, Cr .76 BUN 11
T4 13.42 TSH 5.76.
HIV: negative HTLV-1: negative.
Toxic metabolic panel: negative for Cannabis, cocaine, amphetamines, benzos.

LP: pH 8, Glu 70, prot 20, LDH 12, negative film array. Genexpert, oligoclonal bands were negative.
Negatives: Autoimmune encephalitis panel, Quantiferon.
Anti thyroperoxidase: Very high.

Imaging:
EKG, EEG, MRI: Unremarkable
CT-chest: R-pulm lobe calcifications

Final Diagnosis: Hashimoto encephalopathy

Problem Representation: 18yF w/ important autoimmune PMHx p/w new onset tonic-clonic seizure activity, hallucinations and hyperadrenergic state.

Teaching Points (Maria): #EndNeurophobia

- **AMS MIST Time Course:** Metabolic: any time onset. Infections: +/-systemic signs; pyogenic - acute, other infections can be subacute. Stroke: hyperacute. Tumors: increased intracranial pressure, gradual onset.
- **Demographics:** In younger patients: inflammatory, autoimmune, epilepsy. **Strokes** also happen in young patients! Risk factors: dyslipidemias, vasculitis. Ischemic rarely presents with seizure
- **Incoherent speech:**
  - Local (space occupying lesions - infections, tumors, stroke, localized inflammatory lesions) >> Global (confusion, dementia): Metabolic, Toxins, Infections
  - Aphasia (language) vs dysarthria (motor)
- **Incontinence:** ACA strokes, seizures.
  - **Seizures:** focal (preserved or altered awareness) vs focal → generalized vs generalized. MC of acquired epilepsy in world: NCC.
    - PRES: radiological syndrome explaining HA, seizures, AMS. Causes: HTN Encephalopathy, Preeclampsia. Chemotherapy.
  - **Hydrocephalus:** communicating vs non communicating/obstructive. **NPH Illness script:** older patients w/gait apraxia, incontinence, dementia.
- **Hallucinations:** Psychiatric vs Toxic vs Neurological: seizures occipital(simple geometrical shapes), temporal (more complex shapes); autoimmune encephalitis
  - **Anti-NMDA Encephalitis:** Rapid onset of psychosis. 50% have teratoma.
  - **Neurocysticercosis Encephalitis:** miliary neurocysticercosis **in** younger female patients. Do not treat w/antiparasitics; only steroids.
- **Hyperadrenergic state:** toxins, medications - levothyroxine, hormones (Hashimoto encephalopathy: rapidly progressive dementia, new onset epilepsy. Anti thyro-peroxidase positive (common antibody in population - low specificity), no neuronal antibody marker yet.)