04/18/21 Neuro Morning Report with @CPSolvers

Case Presenter: *Valeria Roldan(@valeroldan23)* ***Case Discussants***: *Nilayan Sarkar (@nilayansarkar) and Subhangi Chandan(@subhangichandan)*

CC: Frequent stumbling

HPI: 47M
3y: Stumbling progressive weakness bilateral limbs lower
Past months: Constipation, nocturia.
Past weeks: Erectile dysfunction.

Denies: Weight loss/fever

Vitals: **T**:37C **HR**:90 **BP**:140/90 **RR**: 18 **SpO_2**:
Exam:
Systemic: Mouth gingival bleeding
Neuro
- **Mental Status:** Oriented
- **Cranial Nerves:**
- **Motor:** Mild spasticity lower extremities, increased muscle tone. Strength ⅘ bilateral lower extremities
- **Reflexes:** Hyperreflexia, clonus, bilateral + babinski, Left Hoffman +
- **Sensory:** Nl
- **Cerebellar:**
- **Other:**

PMH: CABG 1 y ago. HTN 7y ago, Parasitic infection 4y ago (treated).

Meds: AAS Atorvastatin ,Enalapril.

Fam Hx:Wife w/ multiple sclerosis.

Soc Hx:Originally from the Andes.

Health-Related Behaviors:

Allergies:

Notable Labs & Imaging:
Hematology: Hb 13.5
Chemistry: WBC, hepatic, renal Nl

Imaging:
LP: opening pressure 14 cmH2O, clear, 10 L: 100% lymph, 65 prot, 60/80 glucose.
Negative: TB, Crypto, VDRL, HIV
Chest XR: Nl
MRI spine: Atrophy of dorsal spine, loss of motor axons
Immuno Essay: HTLV-1 +

Final Dx: HTLV-1 associated myelopathy

Problem Representation: 47yM from Peru p/w chronic progressive b/l lower extremity weakness associated with constipation, nocturia and recently erectile dysfunction. PE notable for UMN signs and gingival bleeding.

Teaching Points (Maria): #EndNeurophobia

- **Chronic Neurological DX:** slowly growing mass, degenerative (MSK), indolent infections (TB, fungi, HTLV1, HIV), neurodegenerative, toxic.
- **Gait is a "stress test"** evaluating ocular - vestibular - higher order motor fx (NPH - magnetic gait, gait apraxia; still able to do complex movements with legs) - cerebellum - PNS: motor and sensory - proprioception (Romberg). Non neurological problems: orthopedic, vision, environment, OH, polypharmacy.
- **Bilateral Lower Extremity Weakness:**
  - Divide between UMN (Brain (most medial structure of motor homunculus - legs: ACA strokes, parasagittal meningiomas) and Spine) vs LMN (Roots and Nerves) signs vs Muscle (usually proximal w/preserved reflexes).
  - UMN: "everything goes up" - increase tone, hyperreflexia, "up going toe", pattern of weakness: pronator drift. Hoffman sign: "upper extremity Babinski sign" - abnl flexion of index finger when its flixed.
  - Autonomic features: spinal cord or cauda equina (short nerves from cord → sphincter; most neuropathies are length dependent - affects long > short nerves)
  - Associated sensory loss: Not localizable to muscle or NMJ. Localize to nerves and spinal cord.
- **Micro and Spinal Cord/Cauda Equina Venn Diagram:** schistosomiasis → acute myelopathy. Neurocysticercosis: brain > spine. TB - Pott's disease, spinal meningitis/arachnoiditis, tuberculoma.
- **Heme and Spine Venn Diagram**: hematomas, extramedullary hematopoiesis, HTLV1?
- **Spine DX:** extradural (bones), intradural extramedullary (meninges - better seen w/contrast), intradural intramedullary (meninges + spinal cord).
- **Atrophic spinal cord**: hereditary neurodegenerative, HIV and HTLV1 myelopathy.
- **HTLV1**: Can cause spastic myelopathy and motor-neuron disease. Also associated with T cell leukemia/lymphomas and co infection w/Strongyloides.