# 10/9/21 Neuro Morning Report with @CPSolvers

***Case Presenter***: *Gabriel Talledo (@gabrieltalledop)* ***Case Discussants***: *Rafael Alvim and Abdulaziz Hasan*

**CC**: Difficulty walking

**HPI**: 18yoM p/w difficulty walking. 7 days before, he had back pain of sharpening nature and 6/10 intensity. 5 days before, the pain irradiated through his chest and abdomen like a belt. He also refers a sensation of needles crossing his chest and upper back when water runs through his body at bathing and the when he dries himself w/ a towel, he refers pain. The next day, patient w/ difficulty in urinating and constipation.

**ROS**: 3 weeks ago - fever, HA, odynophagia, mouth ulcers resolved spontaneously after 5 days.

**PMH**:

Asthma.

**Meds**: Paracetamol Albuterol.

**Fam Hx**: None.

**Soc Hx**: From Peru. No recent travel history.

**Health-Related Behaviors**: No drug use.

**Allergies**:

**Vitals**: **T**:37.5 **HR** 94: **BP**:150/90 **RR**: **$SpO_2$**:

**Exam**:

- **General** Oriented and alerted. Normal capillary refill. No LAD.
- **Respiratory and CV:** normal
- **Abdomen:** distended bladder
- **Neurology:**
  - **Motor:** hypotonia and weakness 4/5 in inferior muscles. Conserved tropism.
  - **Reflexes:** knee-jerk reflex 0/4. Ankle jerk reflex 1/4. Other reflexes nl. Babinski neg b/l, abdominal reflexes negative b/l
  - **Sensitive:** Below T6 - no temperature and pain sensation

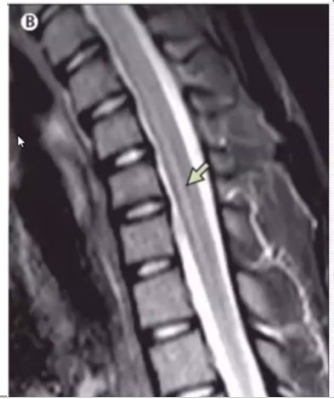
**Notable Labs & Imaging**:

**CBC and BMP:** Normal. HIV negative HTLV 1 neg Brucella neg Salmonella neg Syphilis neg HAV/HBV/HCV neg

**LP**: pression 6cm /colorless w/ leukocytes 10 (LMN 90%) RBCs 0, Gluco 96 Prot 82 ADA:1.6 Brucella, crypto, entherpex (HSV 1-8) neg

**Imaging**: CXR nl

Thoracic MRI: longitudinal hyperintensities along medullary cord.



Enterovirus PCR testing in CSF: positive

**Final dx: transverse myelitis secondary to enterovirus**

Rx: corticosteroids

**Problem Representation**: 18yM p/w acute gait impairment after a subacute infectious disease presenting w/ mouth ulcers associated w/ urinary dysfunction and constipation.

**Teaching Points (Maria)**: #EndNeurophobia

- **Gait is a symphony of the neuro system:** it involves input (sensory, vision, vestibular system, proprioception), integration - higher order (mental status, basal ganglia, cerebellum) and output (motor).
- **Sensory involvement - Pain**
  - CNS: Thalamic stroke - pure sensory lacunar syndrome, would be unilateral unless bilateral thalamus involvement
  - Spine - dermatome, sensory levels. Cord or cauda equina - consider it if we have saddle anesthesia or autonomic dysfunction (urinary incontinence, constipation/incontinence, erectile dysfunction)
  - PNS: polyneuropathy. Muscle or NMJ - don't cause sensory symptoms on its own.
- **Spinal cord:** Not all sensory inputs travel together.
  - Dorsal Column (DC): proprioception, vibration, touch.
  - Spinothalamic (ST): pain and temperature
  - Corticospinal tracts (CS): motor
- **Spinal Syndromes:**
  - Transverse myelitis affects all tracts. MS may show inflammatory non transverse or asymmetric lesions in spine.
  - Spinal artery occlusion: affects CS and ST. Etiology is vascular so expect sudden onset.
  - Hemisection: Contralateral ST, Ipsilateral DC and CS tract.
  - ALS: UMN + LMN signs. No sensory or bladder/bowel dysfunction.
- **Spinal shock:** early period of CNS injury can present without classic UMN signs and rather present with hyporeflexia.
- **LP**: low glucose - infectious and malignancies. Albuminocytological dissociation (few cells, high proteins) - nonspecific inflammation.