02/14/24 Morning Report with @CPSolvers

*"One life, so many dreams" **Case Presenter**: Yazmin Heredia Allegretti (@minheredia) **Case Discussants**: Sharmin(@Sharminzi) and Jack Penner*

CC: A 36 yo male referred from Neurology for 4 wk urinary retention.

HPI: Had retention for 2 wks-> Saddle anesthesia, b/l LE paresthesia, b/l LE myoclonus described as contracting movement before presenting with urinary retention in ED.

ROS: No abdominal pain, no dysuria, no pyuria. Headache, nausea, rashes, night sweats, unintentional weight loss, photophobia also negative. Went in because pain with urinary retention was "unbearable"
Course: Needed catheterization even after 5 days of admission. Symptoms improved on Acyclovir.

PMH: none

Meds: none

Fam Hx: Mother has DM

Soc Hx: Alcohol, No smoking, No drug use

Health-Related Behaviors: Has pet with uptodate vaccination

Allergies: NA

Vitals: T: 36.4 HR: 82 bpm **BP:** mmHg **RR: 15**pm **SpO2**: 96% on RA
Exam:
Gen: nl, **HEENT:** nl **CV, Pulm & Abd:** nl
Neuro: 3+ symmetric DTR in all limb, loss of touch in b/l soles, Proprioception nl, No sensory level detected, Plantar reflexes nl, speech and cranial nerves normal
Extremities/skin: No rash, no mucosal lesions

Notable Labs & Imaging:
Hematology:
CBC: wnl

Chemistry:
Electrolytes: nl, LFT: nl

B12: 290 (low), Homocysteine 0.2, CRP: 5.9, Copper:nl ESR: 30.9, CRP:5.9, Aldolase: nl methylmalonic acid: nl Lyme titers: nl SSA/SSB: nl antibody panel: nl ACE:nl
Viral panel (Enterovirus, Hepatitis, HSV, HHV, Varicella, EBV, CMV):nl, Culture: nl, CSF analysis: WBC 65, RBC 0, Glu 45, Protein 64, Lymphocytes 88, Monocytes 12, IgG 68 (high) CSF viral panel: HSV2-> Improved on Acyclovir

Imaging:
CT abd: No mets, no tumor, cholelithiasis w/o cholecystitis
CT chest: Calcified nodule, no PF
Brain MRI: No demyelinating lesion, no masses, no abnormal enhancement
Spine MRI: Multifocal thoracic cord signal abnormality associated with patchy areas of contrast enhancement. Diffuse enhancement of the cauda equina nerve roots which appear to be more prominent in the lower lumbar and sacral regions

Dx: Elsberg syndrome

Problem Representation: A 36 yo M presenting with urinary retention, saddle anesthesia, b/l LE paresthesia, b/l LE myoclonus, 3+ DTR in all limbs was noted to have normal infectious work up, diffuse enhancement of cauda equina nerve roots on spine MRI, raised IgG on CSF and CSF positive for HSV2.

Teaching Points (Shreyas):
1. **General approach to urinary retention: Think about what we need to urinate!** - bladder (to contract) + open tract (bladder -> ureter -> urethra) ; think is this obstructive (stricture, BPH)
-Medications: Opioids, anticholinergics
-Bladder tone issues: exogenous / 1º neurological issue.
Spinal cord: Autonomic dysfunction (d/t central cord problem can lead to urinary retention)
2. **A good neuro exam and obtaining relevant history is of paramount importance**! When we think about cord compression **ask about IV drug use (think epidural abscess), enquire about trauma.**
3. **Tempo is key** - figure out if the process is acute / chronic and the progress of symptoms to narrow your differential!
4. The exam can serve 2 factors: it can help us localize to a specific level within the nervous system or help prioritize a more **pragmatic approach- what does this tell us about the nervous system, about which we need more information?**
5. Urine retention + saddle anesthesia + myoclonus - makes us think about a pathology in the spinal cord. MRI with contrast can give us lot of information, esp in the context of symptoms concerning for cord compression.
6. **Just because the lower limbs are involved, do not make the mistake of prematurely localizing the d/z to the lower spinal cord**- cervical cord pathology can also present with pure lower extremity weakness!
7. Pause and reflect before pre-maturely attributing lab findings to the patient's current presentation!
8. **Enhancement on MRI of the spine makes us think of inflammatory process** - think (myelitis) -infectious, auto-immune.
9. TM: infectious, autoimmune ; **lymphocytic pleocytosis + imaging findings of enhancement on MRI - make us think of transverse myelitis**. Majority of cases of transverse myelitis are idiopathic!
10. Dx of **Elsberg syndrome** is rare. It is a **post-infectious phenomena** and is often confused with other causes of cauda equina d/t similar presentation. There are specific criteria (Savoldi criteria) used to make this Dx. Patient must have **clinical s/s of cauda equina + time course (subacute/ acute) + radiographic evidence of cauda equina involvement + lymphocytic pleocytosis.**