7/13/23 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: David Serantes(@davserantes) ***Case Discussants***: Rabih (@Rabihmgeha) and Ibrahim (@Ibrahimomer_)

CC: 33 year old female came to the ED with generalized weakness.

HPI: Symptoms started 3 weeks ago, came to the ER with low grade fever, cough, sore throat, diagnosed with respiratory tract infection. Was treated symptomatically and fever resolved, but fatigue and weakness persisted. Came again twice, labs and physical exam was normal. Came 4th time with with other symptoms such as unsteadiness (fell multiple times) generalized weakness, vomiting. Relatives reported inconsistent responses.
No visual symptoms, no fever on 4th visit.

PMH:
None

Meds:
None

Fam Hx: From Morocco, lived in Madrid

Soc Hx: None

Health-Related Behaviors:
None

Allergies: None

Vitals: T: nl **HR:** nl **BP:** nl **RR:** nl **SpO2 nl**
Exam:
Gen: looked unwell
CV: nl, **Pulm:** nl
Neuro: Sleepy, oriented to time and space, intoxicated with complexed commands, nomination and repetition preserved, couldn't follow more than 2 orders, neck stiffness present. Unable to stand, gait was not examined, bilateral dysmetria and dysdiadokinesis, normal CNs, anti-gravitatory maneuvers in upper and lower limbs normal
Extremities/skin: no rashes, no edema

Notable Labs & Imaging:
Hematology:
CBC: normal
Chemistry:
Na: nl K: nl glucose: nl, AST: nl ALT: nl glu: 85
CRP nl, CK nl, TSH nl, Immunoglobulins nl, complement nl
Imaging:
MRI: Unspecified lesions seen in the white matter + cerebellum
LP: clear, glucose 64, protein 57, RBC <5, WBC <5; MiBi: PCR negative for enterovirus + HSV+VZV, HIV negative
MRI: lesions in white matter, and cortical regions. Large lesion in the medulla and pons bilaterally and a lesion in cervical spine.
Repeat LP: positive oligoclonal bands
Pt receive prednisolone 1 mg per day, with improvement - symptoms resolved within 30 minutes. Pt started complaining about … in arms.
Next week, new symptoms appeared. Repeat MRI showed new lesions
6 months ago she had an episode of urinary incontinence.

Final Dx: Rare presentation of MS (she was started on Natalizumab)

Problem Representation: A young female p/w subacute generalized weakness & encephalopathy in the background of a prior ep of urine incontinence, found to have diffuse white matter and cervical spine dz w/ oligoclonal bands on LP.

Teaching Points (Marino):
-Weakness is a vague chief complaint. Is it true weakness or subjective (fatigue/lethargy)? Look for clues in the physical exam, history and demographics to narrow down your differential diagnosis.
-Weakness ddx: neurological disease vs muscle pathology vs asthenia vs metabolic vs medications vs inflammation.
-Ask the patient to describe the weakness with questions such as: When did it start? Has it progressed? **Any associated symptoms**?
Is it isolated or generalized?
-**Clues for neurological weakness:** weakness with movement. Weakness at rest suggests more of a non-neurological disorder.
-In a young female patient with no relevant risk factors always consider autoimmune disease: Bad genetics, bad luck and bad environment.
-Cerebellar signs + neck stiffness: CT/MRI should be done ASAP, rule out hemorrhage.
-Categories of CNS disease: Vascular (ischemia/bleeding), compression and inflammatory disease. Both vascular and inflammatory can present with neck stiffness.
-Time course is key to differentiate between vascular (more acute onset) and inflammatory is more subacute/insidious.
- Multiple lesions in the white matter could suggest an occult systemic process (malignancy).
-In the setting of this patient, acute disseminated encephalomyelitis should be evaluated. MRI will give us clues.
-Oligoclonal bands on LP suggest a demyelinating disorder. Brain + spine lesions suggest that hypothesis even more (MS, Neuromyelitis optica and ADEM).
ADEM on MRI: asymmetric white matter changes and symmetric grey matter changes, mass forming; spinal cord involvement, incomplete ring enhancement; DWI: restriction in peripheral rim.
-If no infection is present, start immunosuppressive therapy with steroids, as patient can quickly benefit from that.