05/11/21 Neuro Morning Report with @CPSolvers

Case Presenter: *Ori Lieberman (@Orilieberman)* ***Case Discussants***: *Pariniti and Dhruv Srinivasachar (@TheRealDSrini)*

CC: unwanted movements of the arm and leg.

HPI: 81-year old male presents with a history of 2 months of sudden onset of left leg shaking and "feeling of imbalance". The leg shaking fluctuates, is episodic and happens many times a day, with a duration between seconds/minutes. The movements can happen at rest, but are more prominent when he tries to do something. The movement start in the left leg and then progresses to left arm and then to right arm. He also complains of trouble sitting up in a chair and staying stable sitting up. This is impairing his everyday activities, and he is not able to work with his hands anymore. He denies other neuro symptoms, infection, or change in weight.

PMH:
HTN
Hyperlipidemia
Hypothyroidism (6 mo prior)

Meds:
Metoprolol
Losartan
Statin
Levothyroxine

Fam Hx: None

Soc Hx: lives at home, independent, he was working until the month prior.

Health-Related Behaviors: denies tobacco, ethanol or drug use
Allergies: none

Vitals and systemic exam: normal, no orthostatic changes. **Neuro Exam:**

- **Mental Status:** intact, clear speech
- **Cranial Nerves:** ocular overshoot
- **Motor:** normal tone and bulk of muscles, no obvious weakness (difficulties in the strength testing due to the movement)
- **Abnormal movements:** wing-beating tremor described as wild beating of the arm. Action induced aspect present. Also happen suddenly.
- **Reflexes:** deep tendon reflexes normal. **Superficial:** plantar reflex upgoing bilaterally
- **Sensory: normal**
- **Cerebellar:** unable to do finger-nose, he had difficulties performing the tests due to movements
- **Other:** unable to walk

Notable Labs & Imaging:
Hematology/Chemistry: normal
Serologies: negative (HIV/RPR/Rheum factor/ RO/La antibodies negatives
LP: normal opening pressure, glucose 62, protein 41. Serum glucose: 112.
CSF antibody tests and serology: negative for Lyme, meningoencephalitis panel, cultures, cytometry: no proliferation.
Brain MRI with contrast: hyperintensity in the right superior parietal lobe, no contrast enhancement
3 days of methylprednisolone due to concern of paraneoplastic sd. (not confirmed), also received carbidopa/levodopa and clonidine- no changes in the symptoms. He was referred to other hospital and re-evaluated:
EEG: pattern of epilepsy partialis continua. Received Ativan (lorazepam) and Keppra (levetiracetam). Post-ictal with weakness of the three affected limbs. Evolved with declined mental status, dysphagia, agitated, suicidal for several days. Treated with IVIG empirically: also no effect in the symptoms.
CT abdomen/chest/pelvis: no concerning masses.
Developed rhythmed switches and myoclonus. Hes was intubated and brought to ICU, where he had a generalized tonic-clonic seizure and repeated EEG showed right posterior slowing.
Repeated MRI: cortical ribboning in the right insula and parietal lobe . Empirically given plasma exchange without improvement. LP: positive RT_QUIC. Autopsy: spongiform changes consistent with CJD.

Final diagnosis: CJD causing epilepsy partialis continua

Problem Representation: Elderly male presents with episodic involuntary movements, and new-onset epilepsy w/o mass lesion in the MRI.

Teaching Points (Kiara): #EndNeurophobia

- **Involuntary movements:**
  - Hyperkinetic: Tremor, Corea, Balism, Athetosis, seizures-myoclonus, dystonia, fasciculations, tics.
  - Hypokinetic: Parkinsonism-resting tremor (Parkinson's dz, plus sd-DLB, Cortical-basal ganglionic degeneration, progressive supranuclear palsy, and drug-induced like metoclopramide, antipsychotics, heavy metal exposure).
- Shaking imbalance and triggered by action: Ataxia (sub acute in elderly, possible paraneoplastic like ovarian/breast), paroxysmal dyskinesia (triggered by exercise).
- Round clock weakness (Cervical medullary junction), limb shaking TIA (carotid dz), wings-beating can be seen in Wilson's dz (younger, symmetrical), large in amplitude (cerebellar), jacksonian march (partial seizure → spreads to limbs).
- **Functional neurologic dz:** Movement disorder that doesn't fit in any specific type. Check amplitude changes, distraction maneuvers. Difficult to diagnose and not relevant on images.
- New-onset epilepsy w/o lesion: Autoimmune (Ab mediated-paraneoplastic), CJD.