05/29/24 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: Jas Bajwa(@) Case Discussants: Sharmin (@) and Jack (@)

CC: 53 M vomiting, abdominal pain and weakness that led to a fall (presentation in december)
HPI:
Ct abdomen/pelvis: BL GGOs suggestive of aspiration/atypical pneumonia, Zosyn + Vanco →
Admission on Ceftriaxone/Azithro, RSV; Initial Covid, Flu neg, BC pending
CT head with no acute pathology
Patient reported cyclic vertigo for four days, but prioritizes GI symptoms
Generalised weakness (not one-sided)
ROS: No chills fever, chest pain, 25 pound weight loss

Progressive resp. failure - **CT-A** neg for PE, but showing extensive airspace disease, consistent w/ pneumonia, increased O2 requirement, on HFNC, low O2 →
Intubation
Bronchoscopy: alveolar hemorrhage
Positive test for Influenza

PMH:
HTN
PE
Essential Erythrocytosis (H/H 15.1/47)
JAK2 and CALR negative (PV/MPN less likely)
Depression
Meds:
Eliquis

Fam Hx:
None

Soc Hx:
Cocaine and Mariuhana (quit 10 years ago)
No alcohol

Health-Related Behaviors:

Allergies:

Vitals: T: 100.4 F **HR:** 101/71 **BP:** 119 **RR:** 32
Exam:
Gen: Acute distress, anxious , malnourished
HEENT:
CV: Tachycardic, no JVD, bl pitting LE edema
Pulm:
Abd: No TTP, soft
Neuro: Symmetric facies, decreased bulk throughout, trace withdrawal in RUE and bl LE but not LUE, reflexes absent in knees and ankles b/l, toes down bl

Notable Labs & Imaging:
Hematology:
WBC: 12 Hgb: 10.8 HKt 31 Plt: 117 MCV 68 Diff wnl
CMP wnl Hypo Ca 6.9 Hypo Mg 0.9
Iron 25 TIBC 129 Ferritin 975
Pan Spine MRI (C/T/L) wnl
B12 wnl, MMA wnl, Vit B6 low, Thiamine wnl

After extubation, ptosis was noted
→ **LP**: clear and colorless, mild elevated protein 46 (45 ULN), normal glucose, 2 nucleated cells, lyme and syphilis negative
CT Chest: negative for thymoma
ACh-R AB and MuSK negative
ANA, ANCA, UA, Anti dsDNA, Vitamins negative
EMG: diffuse and generalised axonal neuropathy, decrement with repetitive nerve stimulation
LRP4 AB positive

Dx: Myasthenia gravis

PR: 53 M with a PMH of HTN and PE due to EE, presents with abdominal pain, vomiting and weakness along with significant weight loss and over the course of hospitalisation was found to have progressive respiratory failure and DAH requiring intubation in the context of LRP4+ MG.

Teaching Points (Julia):
first concentrate one the symptom with the highest **specificity** to narrow down your differentials → abdominal pain > vomiting & weakness (also think about them being a **sequelae** of the presenting complaint)

Diffuse alveolar hemorrhage (DAH) (meds: oral anticoagulants, Amiodaron, Nitrofurantoin; small vessel vasculitis: GPA, MPA, Behçet syndrome; rheumatic disease: SLE, Anti-GBM, Polymyositis, PLS; infections: leptospirosis, VZV, hanta-virus, influenza (less common); cancer: angiosarcoma, APML

Create your **venn diagram** of the presenting symptoms
1. **Vasculitis + Abdominal pain** → PAN, HSP, GPA, EGPA, MPA
2. **Vasculitis + neuropathy** → small vessel e.g. GPA MPA, cryoglobulinemia, HSP (= mononeuritis multiplex - asymmetric)
3. **Ascending demyelinating** peripheral neuropathy → Guillain Barre syndrome (sens., mot. Miller-Fisher…)
4. **Spinal cord**: affection of anterior horn cells → transverse myelitis (viral: West Nile, CMV, polio)

Peripheral neurological process : Parainfection vs paraneoplastic
B6 low → paresthesia, less likely leading to drop reflexes and weakness (think demyelinating process)

Falsify morbid and do not miss **differentials** (here: CMV, EBV, influenza, small vessel disease, SLE) before manifesting on the most likely diagnosis at the time

Pneumonia (influenza)can trigger myasthenia gravis; + anticoagulation -> necrotizing pneumonia (DAH)

Serology in myasthenia: 85% anti- **AChR** Ab, , Thymoma 98-100% → AChr B, **MUSK** Ab 8% Ab , **LRP4 Ab** 1%, **EMG pos + seronegative** = 6%