8/27/26 Morning Report with @CPSolvers

"One life, so many dreams" **Case Presenter**: David **Case Discussants**: Rabih & Varsha

https://clinicalproblemsolving.com/present-a-case/

Scribing (Eyron):

CC: AMS

HPI:

80/F brought to ER due to decreased consciousness. Per daughter, heard a strange noise when patient was sleeping (related to ?work of breathing) and called EMS. Upon EMS arrival:

Patient was unresponsive, GCS 7, afebrile, BP 100/60, HR 95, SpO2 84% on RA, RR 35, glucose 140, pupils reactive, CV/lungs nl, abd non-distended, non-tender

Given fluids, O2, and flumazenil without improvement

Family reports functional decline in the last year. 1 month ago, able to eat and dress but needed some help with hygiene. In the last year, walking with assistance and difficulty climbing stairs. 10 days ago, had ED visit and dx with AF and UTI

2 days ago, noted increased WOB when she went to bed. Per daughter, pt has also been dragging her right foot for the last year. Also associated with dysphagia to solids and liquids and hypophonia

ROS:

No urinary or fecal incontinence, fevers, chills, chest pain, dyspnea, cough, abdominal pain, n/v.

(+) Constipation, fatigue, decreased activity, decreased appetite, weight loss, depression.

PMH:

HTN

AFib - dx 10 days ago

Tension headache

MDD - dx 5-7 years

Meds:

Heparin

Bisoprolol

Amitriptyline

Desvenlafaxine

Aripiprazole

Lorazepam

Social Hx:

Lives with daughter, works cleaning

Denies EtOH

Vitals: HR: 80 **BP**: 130/70 **RR**: 30 **Sat**: 84% on RA -> 93% on 3L NC

Exam: Gen: nl

Neuro: A&O, normal speech, no dysarthria, normal VF, nl pupils, no nystagmus or diplopia, no ptosis, CN V and VII nl, lingual movements nl, cervical strength 5/5, ⅘ in the UE, RLL: knee flexion ⅗, foot dorsiflexion 0/5, right foot drop

LLL: ⅘ globally, normal reflexes, no clonus, no hoffman or babinski, no fasciculations, no tremor or rigidity, hypoesthesia in the right leg, amyotrophia in both hands, weakness in hand group, increase motor reflexes

Notable Labs & Imaging:

Hematology:

WBC: 4.8k Hgb: 14.6 Plt: 253k MCV: 99

Chemistry:

Na: 139 K: 4.9 Ca: 9.1 Mg: 2.2 BUN: 27 Cr: 0.9 Glu: 150

AST: 98 ALT: 145 T. Bili: 0.5 LDH: 420 (H) CRP: 0.3 TSH 0.96 (N)

VBG: pH 7.25 pCO2 97 HCO3 42 Lactate 2 | INR 1 aPTT 25

Ammonia 70 (H), CK nl, anti-AChR and Anti-musk: nl

Imaging:

EKG: NSR, narrow QRS without repolarization abnormalities

CXR: No consolidations, pleural effusions, cardiomegaly. (+) Basilar atelectasis

LS Spine XR: L2 vertebral compression fracture

Abdominal US: nl

CT: No acute intracranial pathology. (+) Mild small vessel disease

Started on BiPAP with rapid improvement - withheld BiPAP after 6 hours - pt alert and able to answer questions. Per son, patient looked nl

EMG: Spontaneous activity in the interosseous and hand muscles, all muscles of lower limbs, more prominent in both tibialis anterior. Chronic neurogenic muscles. Split hand. Compatible with diffuse involvement of 2nd motor neuron in lumbar and cervical levels with signs of subacute or chronic process. Findings compatible with mild distal axonal polyneuropathy.

Dx: Amyotrophic Lateral Sclerosis (ALS)

Problem Representation:

80/F with progressive functional decline in the last year including dysphagia, weight loss, and foot drop brought in with AMS and found to have hypercarbic respiratory failure. Physical examination revealed upper and lower motor signs. EMG noted distal axonal polyneuropathy at the cervical and lumbar levels.

Teaching Points (Kris)

Altered mental status is a nonspecific presentation

Prioritize reversible and life-threatening causes Think MIST mnemonics

Metabolic, Infection, Structural, Toxins/Trauma

First assess for pulse and breathing. Pulselessness indicates cardiac arrest.

Mixed hypoxemic and hypercapnic respiratory failure can cause altered mental status through both reduced cerebral oxygen delivery and CO_2 retention.

CT head to assess for hemorrhage, mass effect, or other intracranial pathology.

If hypercapnia is present, ask why ventilation is failing

Think about causes of **alveolar hypoventilation**:

1. ↓ Respiratory drive: Sedatives/toxins, CNS depression

2. Airway obstruction / increased resistance

Common cause: COPD, Severe asthma, Upper-airway obstruction

Causing inadequate ventilation → **CO_2 retention**

3. Neuromuscular weakness

Myasthenia gravis, Guillain-Barré, Other respiratory muscle weakness

4. Management

Provide **positive-pressure ventilatory support,**NIV such as BiPAP can be considered if the patient can protect the airway, **Intubation and mechanical ventilation** are preferred when there is severe encephalopathy, inability to protect the airway, or worsening respiratory failure.