3/6/26 Morning Report with @CPSolvers

"One life, so many dreams" ***Case Presenter****: Lera Novotnaia (@lera.now)* ***Case Discussants****: Rabih (@rabihmgeha) & Rahul (@RahulPottabath1)*

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

Scribing (Siva)

CC: 62 male with progressive Lower extremity weakness

HPI: started 1 year ago, was active at first, had difficulty climbing stairs and had to use rails to pull himself up. Since last 9 months- no longer able to get out of chair without using his arms to push himself up. He now uses crutches to walk or use a wheelchair

ROS: episodic muscle cramps,unintentional weight loss,
No fever,night sweats,chest pain,SOB,edema, ABD pain, vomiting ,rash,arthralgia, myalgia, numbness, no dysphagia or odynophagia

PMH:
HTN
BPH
Chronic Back pain

Meds:
Amlodipine,
Atorvastatin,
ezetimibe since 1 year.
Dutasteride

Fam Hx: Not significant

Social Hx: N/S

Health-Related Behaviors: N/S
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Allergies:
NKDA

Vitals: T: nl, **HR**: 78 **BP**: 130/75 **RR**: 17 **Sat**:98@RA **BMI**:

Exam: Gen: comfortable, not in distress,looks very thin, significant LE muscle atrophy **HEENT**: **CV**:**Pulm**:**Abd**: -normal

Neuro: Intact CNs,speech normal,no fasciculations, pupils normal,EOM intact,Sensations nl

Motor -5/5 UE with nl reflexes

LL motor strength-⅖ proximal extensors bl,⅗ proximal flexors bl,⅗ distal flexors bl,⅗ distal dorsiflexors bl,⅘ distal plantar flexors bl, Reflexes low bilateral lower extremities ; Extremities/skin: decreased muscle mass

Notable Labs & Imaging:

Hematology:
WBC:6.7(normal diff) Hgb: 15 Plt:274 MCV:88

Chemistry:
Na:144 K: 4.8 Cr: 0.56 BUN: 17.6 Glucose:95 Ca: 9.8
AST: 32 ALT:60 Alk-P:84 Bili:0.84 Albumin: 4.4 Total Protein:7.2
ESR: 7 CRP:1 LDH:317 TSH: nl , HbA1c: 5.3%B12, SPEP, PSA:nl U/A-normal (trace protein) CK-360(ULN-190),Uric acid,TSH-normal
Patient referred to rheumatology. RPR,HIV,Hepatitis panel: negative

Imaging:-
CT C A/P- negative,MRI lumbar spine- mild degenerative changes,no spinal cord compression MRI head-normal EKG: Sinus rhythm(74) with LAF block; CXR: nl; Echo:EF 68%, diastolic dysfunction mild, no pulmonary HTN.
Spirometry-normal.ANA 1;120,
Rheum workup: Ena,myositis panel negative ,ANCA negative,RF negative.
ID workup: lyme -ve, ABV and CMV IgM neg, IgG positive
NCS, EMG-Sensory nerve action potentials(SNAPs) -normal; Reduced compound muscle action potential(CMAP).LMN loss without sensory involvement and diffuse denervation/reinnervation process.Split hand and split leg sign on right.
Muscle biopsy-no necrosis,no inflammation,atrophy +ve

Working Dx: Amyotrophic lateral sclerosis -Progressive muscular atrophy phenotype

Problem Representation: 62 male with HTN,BPH,chronic back pain p/w chronic progressive LE proximal predominant weakness with diffuse muscle atrophy confirmed with EMG,muscle biopsy diagnosed as Amyotrophic Lateral Sclerosis(ALS).

Teaching Points (Manaswini) **Where is the disease?**

-Delineate anatomically(Spinal cord, Ant horn, nerve root, plexus radicle, nerve, NMJ, Muscular) or is there vascular involvement. Ask for other associated symptoms(weight loss here)

- What are we solving here?: Subacute-chronic severely progressive isolated proximal muscle predominantly painful disease with weight loss

-Proximal predominance → muscle,NMJ, plexopathy, neuropathy. But lab signature & profundity of weakness skews localisation here

- Beware of the Camouflage effect of conditions pts present with→ cautiously represent the problem at the initial stages→ Imp to take careful inventory of any other organ involvement

- Decreased reflexes mandates disease in PNS. Only exception→ Acute spinal cord disease(which is not seen here). But disproportionate(drop in reflex compared to weakness) → cluing advanced severe muscular disease

What did labs indicate in this pt?

- Picking up entities in their initial vs late lab form: **ANALOGY**:When Q waves seen after MI, troponin may not be high→ indicates late presentation. But if ST elevations are seen→ then Trop would be very high, and initial presentation
- Here, the Q waves are the low muscle mass(low Cr), AST>ALT
- AST>ALT → rhabdomyolysis (AST in muscles & has shorter ½ life)
- Paradox seen here: Normal albumin in spite of severe weight loss→ indicates the extent of inflammation. **EMG/NCS** will help localise the issue→ acknowledge the ambiguity of exam especially when pt has profound weakness which makes examining the asymmetry challenging.

What is the disease?

- Identifying the pretest probability: DDx→1. Necrotising Myopathy(statin, finger flexor weakness/UL involvement, ½ pts present with -ve serologies) 2. Inclusion body myositis(Anti cytosolic-5-nucleotidase:high Sp, poor Sn) 3. Delayed hereditary/genetic disease presentation OR overlap syndromes/ paraneoplastic.

→ ***Split hand sign(disproportionate weakness of Thenar>hypothenar muscle) → Motor neuron disease → THINK ALS!***

- Use your ears, then eyes, then reach out to your lab tech :) Fun Facts: Medications(Atorvastatin), toxins, associated malignancies pt is vulnerable to(Prostate cancer) . Creatinine derived from creatine indicates muscle mass→ might be on lower side(making AKI can still present with normal Cr)