03/03/21 Morning Report with @CPSolvers

***Case Presenter**: Steph Sherman(@StephVSherman) **Case Discussants**: Ann Marie Kumfer @AnnKumfer) and Zaven Sargsyan(@sargsyan)*

CC: Acute/Chronic CK elevation

HPI: 86M advanced dementia sd and mild COPD. He was admitted during storm due to hypothermia 88F associated w/ bradycardia and hypotension so he was sent to ICU and got better.

14 years prior: Intermittent CK elevation from 1000 to 6000 (highest) without further workup.
Last years: Progressive weak, not able to stand up, brush hair. No arthritis, skin changes, hair loss, dyspnea/ respiratory sd or other systemic disease
Last admission: Received rehab and treated for pneumonia, CK: 500 on admission → 5000 (climbing within the next days).

PMH: Dementia and COPD

Meds: Statin (Atorvastatin 40 mg) since 2007, meds for COPD

Fam Hx:

Soc Hx: No alcohol or substance abuse

Health-Related Behaviors:

Allergies:

Vitals: All within normal limits (T, HR, BP, RR, SpO_2)
Exam:
Gen: Sarcopenic
HEENT:
CV:
Pulm:
Abd:
Neuro: Proximal muscle weakness, abnormal shoulder abduction/adduction movements. Severe weakness to perform any activities.
Extremities/Skin:

Notable Labs & Imaging:
Hematology:
CBC: Nl

Chemistry:
K: Upper limits → normal BUN: nl Cr: nl Phos: upper 5 → normal
TSH: nl, 25 hydroxy Vit D: 66 (nl range), ANA 1/40 homogenous pattern, LDH: 400 (upper limits), AntiGO nl, ESR 67

Received Isotonic fluids when CK 5000. Statin was stopped. Rheumatology consult excluded rheumatoid etiologies.

Final Dx: Probable primary neuromuscular pathology.

Problem Representation: Elderly men w/ advanced dementia and chronic statin user presents w/ chronic, episodic and worsening CK elevation associated with proximal predominance severe weakness.

Teaching Points (Sukriti):
Pearl 1: Approach to muscle injury
Mimics of inflammatory myopathy
Severe neurologic disease, muscular dystrophy (earlier age group), metabolic myopathy (mitochondrial disease), abnormal fat metabolism
Framework:
Infectious - Immunocompromised (EBV, CMV, parasites, SARS-CoV-2) vs immunocompetent (Staph, strep), Medications (Statins, fibrates), Endocrinopathies - hypothyroidism, hyperparathyroidism, Metabolic - electrolytes
Pearl 2: Episodic worsening of chronic muscle injury: "2 hit hypothesis"
- 1st hit-- Genetic predisposition (eg. electrolyte abnormalities) vs Non genetic (eg. Vitamin D deficiency)

Pearl 3: Statin induced necrotising myositis
Severe acute onset proximal muscle weakness
Ab against HMG-CoA
Highly elevated CK
Autonomous even once you stop the statin
Pearl 4: Genetic predisposition to muscle injury
Beckers (young adult) vs Duchenne(Dx in children)
Metabolic - Glycogen storage disease
Pearl 5: Inclusion body myositis
Inflammatory muscle disease in older adults, Proximal and distal muscle involvement, asymmetric, mild (10x upper limit) CK elevation