



# 03/11/21 Morning Report with @CPSolvers



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**CC:** exercise intolerance + shortness of breath

**HPI:** 92 yo lady with a few months of reduced exercise intolerance and shortness of breath. Used to leave alone, predominantly house-bound, moves with a cane. Last week: moved to daughters' house because of difficulties in doing her activities alone. Week prior to admission: thoracic CT (to investigate weight loss) revealed edema and bilateral pleural effusions.

**PMH:**  
Type 2 DM  
Hypertension  
ACS 1 year ago treated with PCI left  
Possible previous dementia

**Meds:**  
Aspirin  
Clopidogrel  
Bisoprolol  
Ramipril  
20mg of oral furosemide  
Simvastatin 40mg  
Amlodipine 5 mg

**Fam Hx:**  
None

**Soc Hx:**  
Nonsmoker

**Health-Related Behaviors:**  
No alcohol or recreational drugs

**Allergies:**  
None

**Vitals:** T:afebrile HR: 90 BP:?? RR: 25 SpO<sub>2</sub>: 89% room air

**Exam:**  
**Gen:** cachetic looking, muscle wasting and sarcopenia  
**CV:** normal, JVP not raised  
**Pulm:** bilaterally reduced in the basis  
**Abd:** soft, nontender, shifting dullness -> ascites  
**Neuro:** intact  
**Extremities/Skin:** bilateral peripheral edema

**Notable Labs & Imaging:**  
**Hematology:**  
WBC: normal Hgb: normal Plt: normal

**Chemistry:**  
Na: 129 | K: 4.5 | Cl: normal | Cr: value for CKD stage II  
AST: normal | ALT: normal | Alk-P: normal | T. normal | Bili: normal | Albumin: 22g/L  
Urine dipstick protein ++++  
Increased protein/creatinine ratio  
24 hour urine collection: 16 g  
Anca/HepB/HepC/HIV/ANCAs: negative  
Phospholipase A2R positive.

**Imaging:**  
EKG: sinus rhythm, anterolateral q waves  
CXR: bilateral pleural effusion, worse in the right  
Echo: moderate EV impairment, EF 43%  
COVID-19 test: negative

**Final diagnosis: Nephrotic syndrome --> Primary membranous nephropathy**

**Problem Representation:** 92 yr old F w/ history of DM & CAD presenting with subacute dyspnea and decreased exercise tolerance, with ascites, anasarca, and cachexia.

**Teaching Points (Gurleen):**

- **DYSPNEA** - think dyspnea pyramid with base rate: cardiac (HF), pulmonary (COPD). **Anatomic approach:** myocardium, pericardium, electrical, airways, parenchyma, vasculature, alveoli, pleura. Chest wall, neuromuscular, heme/other.
- **TIME COURSE:** acute vs. subacute (exercise tolerance first, then dyspnea)
- **Who is the patient?** Baseline functioning, CVD risk factors, older age - atypical ACS presentation, albumin may be low at baseline
- **VOLUME OVERLOAD:** heart (JVD), liver (cirrhosis - hyperestrogenism - palmar erythema, gynecomastia, telangiectasias), kidneys (upper extremity edema)
- **EDEMA:** pitting (increased hydrostatic pressure - decreased pump, decreased SVR, venous compression, obstruction OR decreased oncotic pressure) vs. non pitting
- **CLUES in our patient:** peripheral edema, ascites (consider liver pathology), cachetic (HF, malignant pericardial effusion, thiamine deficiency, hyperthyroid)  
*Reframe hypothesis - HF but cachexia, decrease likelihood of diagnosis*
- **LOW ALBUMIN:** common: inflammation, liver disease. Nephrotic syndrome, protein losing enteropathy
- **HYPONATREMIA:** decreased effective circulating volume → increased ADH secretion
- **NEPHROTIC SYNDROME:** most common -> diabetic. Other: membranous nephropathy (Phospholipase A2 receptor serology vs. secondary), FSGS, minimal change disease, amyloid, IgA. Kidney only vs. nephritic - systemic, inflammation. *Usually biopsy (less if HIV, amyloid, SLE)*