



10/18/24 Morning Report with @CPSolvers



"One life, so many dreams" Case Presenter: (@) Case Discussants: (@) and (@)

CC: 80 yo male, **worsening renal function**

HPI: worsening progressive **headache** holocranial, **SOB** at rest and on exertion, **hearing loss**, mild abdominal pain, **arthralgia** week, sleep disturbances, mood declined 2/2 pain

Hospital course was complicated by **hypertensive emergency** -> ICU

PMH: CKD IIIA, HfpEF, aFib, left atrial appendage closure, HT, Hyperlip, recently hospitalized for **myopericarditis** 2/2 LAA, BPH, **MGUS** diagnosis last year

Meds: Eliquis, Lipitor, Aldactone

Fam Hx: MGUS

Soc Hx:

Health-Related Behaviors: wine, no smoking

Allergies:

Vitals: T: HR: **125** BP: **190/100** RR: 99% on RA

Exam:

Gen: ill appearing, PERRLA

HEENT: nl

CV: JVD >15, soft systolic murmur

Pulm: clear

Abd: mild abdominal , 5 days ago last bowel movement

Extremities/skin: 3+ LEE, skin elderly lesion, **gate unsteady** (w/walker)

Notable Labs & Imaging:

Hematology:

WBC: nl Hgb:7.7 Plt:nl MCV 87,
Kappa free light chain 67, kappa / lambda ratio 2.2 (nl <3.3 in CKD IIIb),
kappa free light chain 145, **low complement:** C3 < 41 C4<4 , **Cryoglobulin** present, **M spike**, flow cyt.: no plasma cells, no blast, lymphoproliferative disease

Chemistry:

Cr: 1.8 total protein: 5, Albumin 1.2
UA: RBC: 20 , 18 WBC, P/Cr 1780 mg
Neg ANCA, ANA neg HIV PV, HCV neg

Imaging:

Echo: EFD 55-60%, sys function: nl, LVH , LV strain 50,4%, **apical sparing**
CT : subacute venous thrombosis (=>UFH)
Bone marrow biopsy: **kappa restricted**, **plasma cells <10%**, no amyloid depositions. Flow cyt.: no monoclon., no acute leukemia, non hodgkin
Kidney biopsy: light microscopy: **mesenchymal hypercellularity**, EM: irregular segmental dense deposits: matrix w/ epithelial foot processes. Neg. Congo red staining

Dx: **Proliferative Glomerulonephritis, PGMID + Typ I Cryo overlap, IgG1 kappa 3+ LC**

Problem Representation: 80 yrsF with worsening renal function , PMH of CKD , HfpEF, MGUS. Labs revealed low C3, Cryoglobulin , nephrotic syndrome . No amyloid deposition on bone marrow biopsy .

Teaching Points:: (Patricia <3)

Approach to kidney injury :

_ AKI is usually not the #1 problem in altered kidney function . Before anchoring in intrinsic kidney injury(glomerular, tubular , interstitial) it is important to rule out **pre renal** causes like hypovolemia and **post renal** injury caused by a prolonged bladder obstruction from BPH or mass ,

It's important to look at the big picture(other organs) before anchoring on the kidney itself .

_ Creatinine being a bystander of muscle mass it's important to remember that elderly patient usually have low muscle mass

_ Headache + Kidney Dz : not common , look for clues in the hx (migraine , cluster HA, any red flags for stroke? , vasculitis?)

_ SOB+ Kidney Dz : not common look for clues in hx for sign of cardiac dysfunction

_ HF JVD Tachycardia = **impending cardiogenic shock** , in this case Hypertension makes us thing the other way .

Volume overload w/ heart and kidney dz : Which organ to look ?

_ Diuretics response :patient get better >>kidney function worsen think intrinsic kidney dz

Nephrotic synd : loose > 3.5g of protein per day

Hypoalbuminemia < 3

Lower extremities edema

Patient are at inc **risk of thrombosis**

Increase Sediment on nephrotic synd : Intrinsic Kidney dz > glomerulonephritis? Tubulo Nephritis?

Kappa lamb ration will usually go up in kidney Dz, kappa >>lambda

_ Monoclonal protein: Source ?(plasma cells, lymphoplasmacytic cells , lymphocytes

Consequences (none, burden on the cells ,unique specificity of the protein).

Hypocomplementemia : not usual on patient w? Monoclonal gammopathies . Except in case of C3 deficiency dz

Inc sediment + nephrotic overlapping on nephritic synd + Hypoalbuminemia hypocomplementemia = response is in the biopsy