

03/20/25 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: Jerome (@) Case Discussants: Dr. Rich Snyder(@) and Mengyu Zhou (@)



CC: 61 y/o/m presents to the ED for an abnormal lab

HPI: 4day history of colicky left flank pain (15-20 min intervals), dysuria, and creatinine of 2.7 (last labs with PCP 2 years ago was 1.1)

ROS: (-) fever/chills, hematuria, no pus, no sexual contacts, abdominal ROS (+) urinary frequency, dysuria,

steroid, flexeril, given 1l of fluids,

Vitals: T: afebrile BP: 165/97 HR: 87 Sat: 95% RA BMI 44
Exam: Gen: african american, NAD
HEENT: periorbital edema, circumferentially dark around both orbits, CN unremarkable, EOMI
Neck: no JVD
CV: no murmurs
Pulm: no crackles, no wheezing
Abd: obese, no CVA tenderness, no distention, no fluid wave, no organomegaly
Extrem: pitting edema bilateral up to the knees

Notable Labs & Imaging:
Hematology: WBC: 7.7 (neutrophilic) Hgb: 12 Plt: 270 Hct: MCV:75
Chemistry Na: 137 K: 4.6 Cr: 2.4 BUN: 44 HCO3: 26 AST: nl ALT: nl ALP: 41 Bili: nl Alb 2.6 HA1c 5.3
UA: spec gravity 1.015, small amount of urine blood ph7, nutrite leuk esterase neg, 3-5 WBC per HPF, RBC 3-5, cast neg. No dysmorphic cells / acanthocytes
UPCR: nephrotic range ratio: 13.86 mg/dL urine creatinine 34.7mg/dL urine protein (481 mg/dL) **Urine culture** neg.

Serology C3/C4 nl HIV neg Hepatitis neg ANA neg ANCA MPO/PR3 neg SPEP .8g/dL kappa 64.2 mg/dL (ULN 19.4), lambda 27.5mg/dL (ULN 26.6) kappa/lambda ratio 2.33(ULN 1.65), Anti GBM neg, PLA2R neg

Imaging:
EKG: EF60% grade 1 diastolic dysfunction, mild LVH, LA mildly enlarged
CXR mildly enlarged cardiac silhouette, mild interstitial edema
CTAP contrast: negative for stone no hydronephrosis and no other intra abdominal findings
Renal US: no obstructive uropathy no hydronephrosis, no prostatomegaly, decompressed bladder kidney: 11.8cm L kidney 12cm, normal cortical thickness and no mass
Renal artery duplex: unremarkable

Biopsy 2+ granular deposits of IgG in a focal segmental pattern 2+ amounts of C3 3+ kappa. 3+ lambda light chains, PLA2R neg congo stain neg - evidence of tubular injury, disproportionately greater interstitial fibrosis to the degree of tubular atrophy, global glomerulosclerosis, foot process w/ severe effacement

Dx Secondary Membranous nephropathy (2/2 malignancy?)

Problem Representation:
 A 61 y/o obese african american male p/w acute onset of left flank pain, hypoalbuminemia and periorbital edema was found to have a nephrotic range proteinuria w/ elevated urine kappa/lambda ratio.

Teaching Points (Sawsan):
Approach to CC: Flank pain + AKI:

- buckets of AKI> prerenal ,intrinsic (infarct think in pts with afib and gross hematuria, pyelonephritis) ,post renal (nephrolithiasis,hydronephrosis due to mass,...)
- Don't miss extrarenal causes of flank pain like AAA
- Ask about history of trauma > subcapsular hematoma

Hx:

- **PMH :Gout and kidney disease :**

- 1- acute uric acid nephrolithiasis 2- chronic gouty nephropathy
- **Medication review:**
- 1- Tylenol can case papillary necrosis
- 2- Be aware of aspirin toxicity
- 3- lisinopril is associated with vasomotor nephropathy
- 4- NSAIDs can cause AKI from a hemodynamic stand point & minimal change disease
- 5- Allopurinol can cause acute interstitial nephritis , check haplotype in high risk populations
- 6- colchicine can have an interaction with lipitor but not with crestor

Physical exam:

- Periorbital edema> aspect of hypoalbuminemia with addition to the bilateral pitting edema and no evidence of HF> prioritize kidney .
- Chandelier sign> tapping on the back > severe pain>jump and want to grab the chandelier and not be touched
- Keep in mind the association between obesity and FSGS

Labs:

- **2 ways for quantifying protein in the urine :**

1- 24-hour urine collection 2- protein/cr ratio: if patient fits in the bell curve (keep in mind things that can give you unreliable pr/cr ratio like low muscle mass, muscular patients , high BMI)

- kappa/lambda are large molecular weight proteins and in settings of AKI or CKD they don't get cleared.

Imaging

- Renal U/S can help us make progress about the time course for example looking for chronic changes like echogenic changes.

- # renal vein thrombosis is more commonly seen with membranous nephropathy
- # with amyloidosis you would expect to see large kidneys
- # tubulointerstitial fibrosis on biopsy > hints towards a chronic process
- # nephrotic syndrome and AKI can cause ATN

PMH: gout , uncontrolled HT , pre DM, Obesity,, sleep apnea, chronic back pain

Meds:325mg Tylenol 500 mg of Aspirin (Goody powder: 2-3 per day), HCTZ, GLP-1 s.c. for 6 month switched to PO Semaglutide 3 weeks ago, Lisinopril, Colchicine, Celebrex, Crestor, MiraLAX , Allopurinol, Flexeril prn, Ibuprofen 600 daily

Fam Hx:

Soc Hx: truck driver

Health-Related Behaviors:
 No illicit drug use, 1 standard drink of alcohol/day, no tobacco use,

Allergies: