11/16/20 Morning Report with @CPSolvers

***Case Presenter**: Dhruv Srinivasachar (@TheRealDSrini) **Case Discussants**: Sherry Chao (@) and Priyanka Athavale(@pri_athavale)*

CC: new elevated creatinine - AKI

HPI: 70yM presents to ED w/2 weeks of increased dyspnea, non productive cough, lower extremity edema and intermittent hematuria w/darker than normal coloured urine. Decreased urine output despite increased diuretics.

2w ago: subjective fevers + chills, sore throat and increased polyarticular arthritis that has since persisted.

ROS: unintentional 20lbs weight loss past 6m. No chest or abdominal pain. No rashes, focal weakness.

PMH:
HFpEF. CAD, HTN, DM2, OSA.

Meds:
atorvastatin, amlodipine, bumetanide, lisinopril, clonidine. Hydralazine - discontinued 4m prior to admission.

Fam Hx:
Not noteworthy.

Soc Hx:

Health-Related Behaviors: former smoker, quit 30y ago. Occasionally drinks alcohol. No other drug use.

Allergies:None

Vitals: **T**: 98.4 **HR**:61 **BP**:132/64 **RR**:18 **SpO_2**:98 RA.
Exam:
Gen: no acute distress.
HEENT: pale conjunctiva, small shallow tongue ulcer.
CV: RR, no murmurs. **Pulm**: normal.
Abd: normal, non tender, non distended.
Neuro: normal
Extremities/Skin: reduced range of motion in both shoulders, but no joint warmth or effusion. Lower extremities: hyperpigmentation consistent w/ chronic venous stasis and mild edema (1+)

Notable Labs & Imaging:
Hematology: WBC: 12 Hgb:9.4 (baseline:11-12) Plt: ?

Chemistry: Na: 139 K:3.9 Cl:105 CO2:26 BUN:55 Cr:3.2 (bl: 1.1-1.2 → 1.9 6m ago) glucose:101 Albumin:2.5

UA: spec gravity 1.010, 68 RBC, 42 WBC, trace leukocyte esterase, neg nitrites, neg eosinophils, qualitative protein 100 mg/dl. Protein - Creatinine Ratio: 5.11
Urine microscopy: numerous dysmorphic RBC, WBC. Muddy brown casts and granular casts.

ESR, CRP elevated, ANA + 1/320, moderate anti-histone antibodies.
Cryoglobulins, anti GBM, RF, anti Smith, anti RNP, anti dsDNA, ASL neg.
Hep B immune, Hep C and HIV non reactive.

Imaging:
CT Abd + pelvis no contrast: multiple renal cysts in L kidney, largest 6.6 cms minimum complexity. No calcifications or renal masses.
Renal USG: renal cysts on both kidneys. No hydronephrosis.
CT Chest no contrast: new multiple bilateral pulmonary nodules. Largest 8mms.

Renal biopsy: necrotizing crescentic GMN pauci immune. P-Anca + 1/640, MPO Antibody: 800, PR3 antibody neg. Likely **hydralazine induced drug associated ANCA vasculitis.**

Problem Representation: 70yM w/ multiple CV comorbidities presents w/ subacute glomerulonephritis and AKI, multiple pulmonary nodules and renal cysts.

Teaching Points (Kiara):
- **AKI:** Post renal (Less urine) Intrarenal (fever, chills,cough-autoimmune/ complex mediated) Pre renal-more common(HF, P edema, hypovolemia)
- **Blood + (dipstick):** Hematuria (RBC +), hemoglobinuria-hemolysis/myoglobinuria (RBC-), pseudo (exogenous pigment)drugs like nitrofurantoin, rifampicin,
- **Pulm-renal syndrome:** GPS, Vasculitis (check on cutaneous manif), connective tissue ds, post infectious complication.
- Clonidine can cause rebound HTN if missed dose and **Hydralazine** can cause drug-induced LES and ANCA MPA associated vasculitis.
- Palm pale Hb <5
- Acute tubular injury (Muddy brown cast)
- **GN** (dysmorphic RBC): **Immune complex** (LES, endocarditis, post infx, IgA neph), **pauci inm** (ANCA, PPA, **MPA**, drugs as hydralazine), **Anti GBM**
- Oral ulcers lupus like disease
- Lupus in lung: Pleuritis, serositis, mediastinal lymphadenopathy. Leucopenia
- Endocarditis -> septic emboli