06/16/21 Morning Report with @CPSolvers

Case Presenter: *Ann Marie Kumfer (@AnnKumfer)* ***Case Discussants***: *Amanda Barreto (@amandabarretof2) and Karl Greenblatt*

CC: Renal failure

HPI: 70M p/w renal failure started on dialysis recently for worsening Cr over past 2 mo. Took naproxen chronically - PCP discontinued due to increasing Cr, however Cr did not improve. Decreased urine quantity, no change in color.
No fever, NS, hemoptysis
Small amt sputum production, no epistaxis, nasal congestion. Feels winded when walking around - 10ft. No orthopnea, PND. Poor appetite, no skin rash, nausea vomiting or sick contacts
Pneumonia episodes - incidentally detected on CT - Tx abx augmentin w/ no improv, no recent abx. Stroke 1 wk ago admitted to hospital - TTE no abnormalities

PMH:
HTN - well controlled, PE Tx anticoagulants; Gout
Stroke 1 wk ago admitted to hospital - TTE no abnormalities

Meds:
Aspirin, allopurinol, apixaban, colchicine

Fam Hx:
Nothing significant

Soc Hx:
no recent travel, sexually active w/ spouse

Health-Related Behaviors: 10 yr prior smoking, no alcohol, herbal meds,

Allergies:
No known allergies

Vitals: **T**: 36.1 C **HR**: 101 **BP**: 109/76 **RR**: 20 **SpO_2**: 95% RA

Exam:
HEENT: L facial droop
CV: Distant HS
Pulm: L field faint bibasilar crackles
Abd: No palpable organomegaly, tenderness; BS +
Neuro: Normal
Extremities/Skin: No CVA tenderness felt, tunnelled dialysis no signs of infection

Notable Labs & Imaging:
Hematology:
WBC: 10 (N diff) Hgb: 11.4 Plt: 171
Chemistry:
Na:138 K: 3.5 Cl: 95 CO2:17 AG 26 BUN: 50 Cr: 4.4
Ca: 9 LFTs normal Albumin: 3
Compl N HIV -ve Hep panel -ve ANA 1:280 CRP 75
U/A:> 100 RBC, 3+ P, U/Cr 1.7
MPO ANCA >60
Imaging:
CXR: Bibasilar reticular opacities in left lung
MRA w/o contrast: multifocal acute b/l frontoparietal cortical subcortical infarcts; L post occipital infarct; R cerebellar infarcts
Proximal V3 vertebral A - symmetric increase caliber
USG Kidney: mild echo no hydronephrosis
Renal biopsy: pauci immune sclerosing glomerulonephritis suggestive of ANCA vasculitis.

Dx: ANCA vasculitis.

Problem Representation: Elderly male w/ rapidly worsening renal function, recurrent lung infections and diffuse brain parenchymal infarcts.

Teaching Points (Vale):
Studying renal failure
- **Who is the patient?**: Age, comorbidities (HTA, DM, Autoimmune, baseline renal function), triggers (NSAIDs, infections -> use of nephrotoxic abx).
- **Time course:** Subacute progression, but rapid to dialysis. Can´t miss RPGN.

AKI: Differentiate by FeNa, Cr.
- **Prerrenal:** dehydration, HF, liver failure, diuretics, NSAIDs,
- **Intrarenal:** Glomerular (Autoimmune disorders, PIGN, Cryo), ATN, AIN, Vascular (TTP, HUS, APS).
- **Postrenal:** Nephrogenic bladder, Urinary tract infection, meds (opiates).

Collecting clues (pulmonary, CNS, renal): Renal failure complication or disease complicated w/ renal failure vs isolated events
- Sputum and winded when walking around: Renal-pulmonary syndromes, vasculitis.
- Recurrent PNA episodes: immunosuppression? (chronic use of corticosteroids?, autoimmune etiology-LES?, Infection-HIV?)
  - Abx Failure: Dose? Non infx causes (malignancy, autoimmune)? Wrong organism?
- Hypercoagulation: History of stroke, PE -> part of nephrotic syndrome, APS, SLE, HIT.

Nephritic Syndrome: glomerular hematuria (RBC casts, dysmorphic RBCs, acanthocytes) +/- mild proteinuria.
- Etiologies: RPGN (rule out vasculitis- ANCA +), DPGN (Type IV SLE nephritis), Post infectious (post streptococcal, IgA nephropathy)
- Normal complement -> prioritize: RPGN (anti-GBM, pauci immune GN), Fibrillary GN, IgA GN.

Could vasculitis explain the diffuse bleeding?: CNS involvement -> ANCA + (Granulomatosis w/polyangiitis, Churg-Strauss Syndrome, Microscopic polyangiitis)