12/13/21 Nephro Morning Report with @CPSolvers

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CC: Abdominal Pain and Edema.

HPI: 36F recently dx w/T2DM p/w abdominal pain - diffuse spotty pain - and edema.

5w prior: first developed pain in L foot. Diffusely involved lower body and flank. Became worse in lower abdomen. Worked up in ED - elevated DD and liver enzymes. TransVag USG: cyst. Pelvic exam: neg gonorrhea and chlamydia, tx for possible PID and discharged. Possible UTI.

2 days prior: Continued w/ abdominal pain. CT scan showed possible pancreatitis and sacroiliitis. Developed worsening edema in lower Ext and face and diffuse pain.

ROS: more frequent urination and change in urine colour. No fever or chills. No HA or vision changes. Regular periods and started menstruating today.

PMH: T2DM- 2m ago)

Meds: Metformin - stopped 1m ago. Ibuprofen 2 days total

Fam Hx: None.

Soc Hx: Originally from Central America. No occupational or TB exposures. No pets.
Health-Related Behaviors: No alcohol, tabaco, drugs or herbal supplements.
Allergies:

Vitals: **T**: afebrile **HR**:90 **BP** 140-150/90 **RR**: nl **SpO_2**:99 **BMI**: 25
Exam:**Gen**:no acute distress.
HEENT: Eye -normal. White coating on tongue.
CV: Normal. No murmurs. No JVD. **Pulm**: CTAB. **Neuro**: Normal.
Abd: Mild pain in suprapubic region and flank. No hepatomegaly.
Extremities/Skin: Diffuse anasarca - non pitting edema and facial edema. Tenderness to palpation in sacral iliac spine. Swelling on hands but no signs of active ? No rashes.

Notable Labs & Imaging:
Previous workups: UAs: proteinuria (3+), no RBC and Hba1c:7.1

Hematology: WBC:8.9 (normal dif) Hgb:16.3 Plt:491
Chemistry:Na: 132 K:3.9 Cl:109 CO2:23 BUN:9 Cr:0.39 glucose: 100 Ca:8 Hepatic panel: normal. Albumin: 2.1 TP 4.8

Urine pregnancy test: neg.
UA: spec gravity 1.009, pH 6, proteinuria >500, neg ketones, large amount of blood (10 RBCs), 10 WBC, 10 epithelial cells, 13 hyaline casts. Protein/Cr,15 Albumin/CR: 11
Urine microscopy: hyaline cells Urine culture: negative.

C3 and C4: normal. CRP <5 ESR: 49
Hepatitis panel and HIV: neg. Quantiferon gold: Neg Strongy: Neg.
SPEP w/free light chains: normal.
RF, ANA, anti dsDNA Phospholipase A2 Receptor : negative

Imaging:Renal USG/Doppler: normal.
Renal Biopsy: possible phospholipase A2 neg membranous nephropathy. Electron microscopy: foot enforcement, scattered sub-epi and mesangial deposits.

Rheum consult: considered spondyloarthritis.
Final Dx: Membranous nephropathy.

Problem Representation: 36F recently dx w/T2DM p/w sacroiliac joint and abd. pain, anasarca and nephrotic range proteinuria.

Teaching Points (Brodie):

- 3+ on UA is significant but it is not great as a marker, UPCR better.
- AKI can also present with nephrotic range proteinuria
- Hyaline casts: prerenal cause
- **Low Anion Gap :** MM, Low albumin, Li,

Nephrotic Range Proteinuria:

- Primary kidney: MCD (NSAID, idiopathic), membranous (solid cancers), FSGS (primary, secondary (BMI increased, OSA+), autoimmune causes (IgG4+pancreatitis)
- Systemic: Diabetes, amyloid, MM

[HIV: FSGS, HepB: Membranous, HepC: MPGN]

- **Nephrotic Syndrome:** proteinuria, edema and hypoalbuminemia, hyperlipidemia + hypercoagulable state which is more common with membranous nephropathy. Albumin < 2.8 or they should be anticoagulated or else with RVT, or DVT.
- **Renal biopsy:** to get a pathological diagnosis but serologies might be required to zero into the etiology.
- Rule out RPGN: ANCA vasculitides, anti GBM [lupus great mimicker]
- **IgG4 disease:** most common renal manifestation: acute interstitial nephritis
- **Membranous Nephropathy:** primary: most are PLAR2+
- Prognostic factors: male sex, nephrotic range proteinuria, abnormal renal function at presentation.
- Course: A ⅓ remits on its own, ⅓ relapse/remit, ⅓ ESRD
- Treatment: ARBs, control NS, till 3-6 months: Immunosuppression: Cytoxan,Rituximab