10/04/23 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: Alec Rezigh(@ABRezMed) Case Discussants: Steph (@StephVSherman) and Ann Marie (@AnnKumfer)

CC: 55 yo man w nausea, vomit and abdominal pain.
HPI: Symptoms started two weeks ago, with crampy abdominal pain, nausea, vomiting, fatigue and increased thirst. Refers abdominal pain worsening after eating, regardless of what was ingested, leading to anorexia and reduced oral intake, but also presents pain with no eating. Associated symptoms: dysuria, left testicular pain and decreased urine output. Denies fever, diarrhea, night sweats, chills, syncope. Long-standing history of diabetes, but was noncompliant due to funding difficulties, returned with medication one month ago. Despite medication, blood glucose at home is still high.
Reports three weeks of blurry vision, right eye pain, headache and 25 lbs of unintentional wt loss over the last three months.
Three prior episodes of eye pain, and vision deterioration, that seemingly self resolved over the past three years, lasting days to weeks at a time.

PMH: DM2
Meds: Insulin NPH, metformin, glipizide (started 5 days prior presentation)
Fam Hx:None
Allergies:None

Soc Hx: From Guatemala, has lived in Houston for twenty years. Worked as a painter. No pets.
Health-Related Behaviors: No tobacco or illicit drug, drinks 3 beers per week

Vitals: T:afebrile HR: 89 bpm **BP:** 166x99 **RR:** 99% RA
Gen: No acute distress, cachetic. BMI 16.29
HEENT: Right sided scleral erythema and injection without discharge, swelling or exophthalmos. By ophthalmology: panuveitis of the right eye.
CV: RRR, normal S1/S2 **Pulm:** wnl **Abd:** soft, non-distended. No tenderness to palpation
GU: mild testicular swelling and tenderness to palpation, no erythema, no warmth. No penile lesions or discharge. No lymphadenopathy. Digital rectal exam: no prostatic pain or tenderness, symmetric enlargement
Neuro: AOx4. Sensation grossly intact to light touch. Strength 5/5 and symmetric. 2+ and symmetric reflexes. No difficulties with deambulation.
Skin/ extremities: no rashes or bruises. No cervical lymphadenopathy. No edema.

Notable Labs & Imaging:
Hematology: WBC: 9.2 (neutrophil predominant) Hgb:9.5 Plt: 346 - consistent w/ anemia of chronic disease
CMP: Na:118 K: 5.6 Cl: 84 BUN:118 Cr:6.2 (4 years prior 0.5) glucose: 530 Ca: 8.3 Mag: 2.5 A1C: 13.4
TSH: wnl CK < 10 CRP <6 AST: wnl ALT:wnl Alk-P: 157 Total protein 9.6 Albumin:3.3 Vit D 23 PTH 105
LA:wnl BHB: wnl CO2 19 Ph 6.3
UA: specific gravity of 1.010 pH 6.5, negative protein, negative ketones, 2+glucose, negative nitrates, 2+ leukocytes, 2+ blood, 7 RBC, 52 WBC, few bacteria
24h hour urine: 393 mg (30-150), negative urine protein electrophoresis. Serum free light chains elevated, but ratio normal at 1.7/ Urine beta 2 microglobulin 1929 (0-300)
SPEP: increased polyclonal gamma globulins, no monoclonal spike (IgG and IgA in high levels). Serum beta 2 microglobulin 4.6 (0.1-1.8)
Infectious testing: all negative **Autoimmune markers:** negative C4<15; C3 wnl
Imaging:
CXR: no acute thoracic abnormality **ECG**: wnl **X-ray of sacroiliac joints:** no evidence of sacroiliitis
Renal US: normal size kidneys, slightly increased echogenicity consistent with medical renal disease, no hydronephrosis or obstruction, distended bladder (450 ml) with echogenic debris.
CT A&P: distended bladder, mild L hydroureter, prostatomegaly, no hepatosplenomegaly.
Scrotal US: left epididymo-orchitis
CT chest: calcified left hilar suggestive of prior granulomatous disease and intraparenchymal abnormalities or lymphadenopathy.
Follow up: Atb was started for a possible UTI and tamsulosin initiated for presumed BPH. Initially acidosis, hyperglycemia, hyperkalemia and hyponatremia improved quickly with insulin and IVF resuscitation. After completion of atb course, Cr plateaued in 4.3 and pyuria and proteinuria persisted -> renal biopsy performed.
Renal biopsy: plasma cell rich interstitial nephritis, diffuse acute tubular injury, no significant glomerular pathology, minimal interstitial fibrosis. Tubulointerstitium shows dense and diffuse involvement by inflammatory infiltrate consistent predominantly of CD56-negative polyclonal plasma cells (normal kappa and lambda ratio) with scattered lymphocytes, eosinophils and rare neutrophils. IgG4 stains a few plasma cells.

Dx: Tubulointerstitial nephritis and uveitis (TINU) syndrome

Problem Representation: 55 yo M with type 2 DM presented with nausea, vomit, abdominal pain, left testicular pain, decreased urine output, uveitis and weight loss.

Teaching Points (Jia):

-Nausea/Vomit/Abdominal pain:
GI pathology: stomach, pancrea, hepatobiliary tract
Out of GI: systemic condition -> infection, malignancy, side effects of medication
- GU Sx(external vs internal urethra)
Think about testes, urinary tract, penis, epididymitis, hernia, vessels
Less common condition: vasculitis
- Chronic inflammatory condition
(eye pain, weight loss, GI, GU, which is the priority? - PE further points out the high possibility of a systemic condition)
a. Diabetic: DKA, kidney dysfunction, eyes (retina damage), gangrene, vulnerability to infection
b. Systemic infection: TB, fungal, STI, toxo, brucellosis, histoplasmosis
c. Autoimmune disease: vasculitis, SLE, IgG4 disease, sjogren
- Hyponatremia: need to be corrected with glucose, analyze with osmolarity in UA
- UA-> **Intrinsic renal process:**
Microscopic RBC to distinguish whether glomerulus -> if glomerular: Nephritic vs nephrotic
Etiology: HIV, syphilis, EBV, hepatitis virus, autoimmune
Renal size: subacute disease may not increase the kidney size immediately
- Sterile pyuria: etiology includes UTI, TB, STI, drug effect
- Imagine vs Biopsy
CT: Calcified left hilar can appear in granulomatous, TB, fungal
Renal Bx: Plasma cell infiltrate +SPEP -> IgG4/ light chain disease
- Tubulointerstitial Nephritis and Uveitis syndrome (TINU)
*Bilateral anterior uveitis + acute kidney inflammation
*Clinical diagnosis: ophthalmic exam + laboratory evaluation+differentiation from infections and other autoimmune condition
*Renal biopsy: inflammatory cells and edema in the renal interstitium. The glomerulus and blood vessels are relatively spared.
*Standard treatment: steroids