03/27/24 Morning Report with @CPSolvers

*"One life, so many dreams" **Case Presenter**: Sameer Salem (@SamerSalem18) **Case Discussants**: Jack Penner (@) and Sharmin (@Sharminzi)*

CC: 52 yo caucasian male with few months of intermittent gross hematuria (on regular check-up)

HPI:
Occasional right flank pain

ROS(-): Fever, weight loss, lower urinary tract symptoms

PMH:
Hypertension

No prior surgeries or malignancies

Meds:
Lisinopril 10mg for 3 yrs.

Fam Hx: None.

Soc Hx: None.

Health-Related Behaviors:
None.

Allergies: None.

Vitals: T: Afebrile. **HR:** 78 **BP:** 131/83 **RR:** 15
Exam:
Gen: Oriented, normal conversation
CV: Regular, no murmurs, gallops.
Pulm: Clear to auscultation.
Abd: No tenderness, no hepatomegaly or masses, normal bowel sounds
Neuro: Normal reflex and motore sensation in all limbs.
Extremities/skin: No edema

Notable Labs & Imaging:
Hematology:
WBC: 5200 Hgb: 17.4 Hkt nl (high 40s) Plt: 240
ESR: nl
Chemistry:
Na: 143 K: 4.7 Cl: 101 HCO3: 28 nl
BUN:21 Cr: 0.98 Glucose: 96 Ca: 9.1
Coag: nl
LFT normal, AST: 35, ALT: 31, Alk-P: Albumin: 4.1
UA: Red colour, specific gravity 1.023
No glucose, ketones, protein; RBCs 3+
Microscopy of UA: Epithelial cells 2/HPF, RBCs >100/HPF, WBC 2/HPF; no bacteria, leukocyte esterase, nitrite

Imaging:
CTAP: 8 cm mass on upper pole of the right kidney, no evidence of spread to the lymph nodes, perinephric fat, or other organs.
Pathology of partial nephrectomy: Clear Cell RCC 8cm sarcomatoid differentiation

Dx: Clear Cell RCC w/ sarcomatoid differentiation

Problem Representation:
52 yo M w/ pmh of fairly well controlled HTN p/w few months of intermittent gross hematuria and occasional R-flank pain. Has a benign physical exam, Hgb of 17.4, and UA that shows many RBCs

Teaching Points (Shreyas):
1. **Hematuria: Things to think about-** Medications, underlying hematological disorders, systemic v/s localized to the GU tract. (kidney, ureter, bladder, urethra and prostate)
Mimickers of hematuria: Woman with vaginal bleeding, Pigments (rhabdomyolysis, hemoglobinuria, porphyria), beet ingestion.
2. Right flank pain + no other systemic symptoms makes us think of **Kidney pathology** (glomerular v/s non glomerular) ; glomerular microscopic > macroscopic [Glomerular hematuria: proteinuria ± RBC casts generally expected] ; non glomerular - pyelonephritis, RCC, polycystic kidney disease **AND Bladder pathology** - urothelial cancer.
3. Good physical exam is key (back, flank), U/A, exam directed to looking for signs of bleeding. (to r/o systemic causes of bleeding) CBC, INR, kidney US (stones/hydronephrosis), CT A/P ; urology consult ± cystoscopy will help further narrow down Dx.
4. Gross hematuria -> anemia: orthostatic vitals can help understand degree of volume deficit and help decide next steps.
5. **Approach to Polycythemia** - **Mimicker** (hemoconcentration), **EPO** (hypoxia as in- OSA/OHS; not mediated by hypoxia as in- RCC) v/s **non-EPO** mediated (polycythemia vera/MPN)
6. RCC paraneoplastic syndromes: Hypercalcemia, HTN, ACTH induced cushing, EPO induced polycythemia.
7. Biopsying RCC carries risk of seeding tumor and ∴ nephrectomy is what gives us a pathological Dx. Checking prior imaging is also useful (to help delineate complex renal cysts v/s malignancy)
8. Genetic testing or no genetic testing? Case dependent, a discussion with patient & family about pros and cons is useful.