02/15/25 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: Elmhurst IM Residency (@elmhurstmed) **Case Discussants**: Austin (@RezidentMD), Ethan (@e_chiu17), Vini (@vinibarzon)

CC: 43-year old women with worsening **hypertension, AKI** and **dropping hemoglobin**

HPI: two days ior to admission she has been complaining of nausea, multiple episodes of nonbilious and nonbloody emesis , **fever** & chills, intermittent mild abdominal pain with no specific trigger

ROS: She denies headache chest pain cough, SOB, flank pain, urinary symptoms, diarrhea

PMH: Uncontrolled DMII (A1c 12.8%) HLD, CKD 3b, HTN

Meds: Insulin Lisinopril, Fenofibrate, Atorvastatin Sitagliptin /Metformin

Fam Hx:

Soc Hx: denies smoking alcohol or recreational drug use; recent travel to Philippines 2 month prior where she experienced fever and emesis and was given unknown meds with no noted relief

Health-Related Behaviors:

Allergies: Iodine, Aspirin, Ketorolac

Vitals: T: 98.7 **BP:**129/86 **RR:** 18 **HR:**91 **Sat:** 99% RA
Exam: Gen: thin, ill appearing, intermittently retching
HEENT: anicteric sclerae, pink palpebral conjunctivae, MMM
CV: RRR no gallops
Pulm: Clear bilaterally no wheezing/rales/rhonchi
Abd: normal bowel sounds, soft non tender, negative CVA, no surgical scars
Neuro: AOX3 , no focal neurological deficits
MSK: no LE edema, warm and dry skin

Notable Labs & Imaging:

Hematology:
WBC: 15.43 Neutrophils: 91.5% Hgb: 10.7 (baseline 10-11)7.2->5.5(d5) -> 6.5 Plt:179k Hct: MCV: 80.3

Chemistry
Na:126 (corrected 131) K:4.1 Cl 95 Cr: 2.91 -> Cr 3.52-> 4.56 (bl 1.2) BUN: 29 G 14 Cr 2.91 (baseline 1.2) eGFR 20 (previously 33-59) Glu 420 Ca: 8.4 Ph: Mg: 2 HCO3: 17 CRP: ESR: LDH: AST: 8 ALT: 11 ALP:67 Bili:0.2 Lipase 42 Alb 2.5, Lactate: 2.1 Trop 55
Blood culture: no growth

Imaging:
EKG: sinus tach
CXR no acute findings
UA: turbid, Glc 1000, trace ketones, moderate blood, RBCs 7.5 WBC 616.44 many bacteria, BHB 0.6
Renal ultrasound: Mild chronic changes with normal kidney size and no hydronephrosis without any signs of bleeding
On admission, she was started on ceftriaxone 2 g as empiric treatment for presumed UTI. She then developed fever, left flank pain, and nausea with one episode of vomiting, found to have a BP of 103/64.
Declined transfusion despite Hgb drop. Discharged. Came back one day later with symptomatic anemia (Hgb 6.2), also found to be hypertensive 184/111, was transfused and readmitted. restarted on antibiotics.
Afebrile, 2 days of abdomen
Abdominal CT bowel obstruction
2 days later, stable for discharge, but then abruptly developed severe LLQ abdominal pain with multiple episodes of projectile nonbilious nonbloody emesis. Abdominal x-ray: Loops of bowel displaced to the right concerning for SBO
CT probable large **subscapular hematoma** adjacent to the left kidney measuring up to 14.0 x 8.8 x 6.6 cm. Hemorrhagic stranding in the inferior left perinephric space. Presumed hematoma causing **compression of the underlying left renal parenchyma.**
Eventually patient had to undergo hematoma evacuation due to worsening AKI (Cr 8), where blood clots were noted with foul-smelling debris, positive for *E. coli*.

Dx Wunderlich syndrome 2/2 perinephric abscess, complicated by **page kidney** (AKI and hypertension 2/2 compression from hematoma)

Problem Representation: 43-year-old woman with poorly controlled DM being treated for acute pyelonephritis develops acute progressive anemia and AKI and symptoms and imaging suggestive of bowel obstruction.

Teaching Points (Lera):

Finding the cause of HTN:
- ***Know your patient:*** look into the reason for current hospitalization, comorbidities and PMH -> uncontrolled DM can leave its footprint — *DKA?* (Look for triggers: 3 I's — infection, inflammation, infarction). *Gastroparesis? Neuropathy that is masking severe abdominal pain?* -> low threshold for CT.
- ***Determine the time course.*** Is it chronic or acute? For acute anemia consider bleeding and hemolysis first (what's more likely with this presentation?).
- ***Look for associated Sx and syndromes*** -> AKI (can be source of current problem), low Hgb (TMA? Can link both issues).

Dealing with multiple problems:
- ***Understand the center of gravity:*** HTN, AKI and anemia are all very common findings in hospitalized patients. Don't anchor right away, can be completely unrelated to the underlying syndrome + *reconsider medications!*
- ***Start your differential broad.*** Consider no-miss Dx, apply separate schema for each symptom, and try to look for common ground. Presence of nausea implies that there's a deeper problem.

Take results with a grain of salt:
- ***Dehydration*** can elevate Hgb readings (true can be even lower), UA showing signs of inflammation + bacteria -> the primary source of infection can be not in urinary tract or is this pyelonephritis mimicker (GN?).
- ***Unexpectedly normal exam*** — *abnormally normal BP* in a patient with a known HTN (another clue for hypovolemia -> fluid resuscitation), *low BMI* (Is the T2DM Dx correct? Prolonged catabolic state due to accumulation of chronic damage?), *normal kidney size in patient with CKD* (Was the DM the true cause? Or is there some local space occupying process?)
- ***Take clinical picture into consideration*** when thinking about possible complications. Don't rely just on lab numbers.

Thinking about infection:
- Fever and chills can indicate presence of infection, and uncontrolled ***DM is a major risk factor*** for complications even from simple infection (ascending UTI -> emphysematous pyelonephritis, renal abscess).
- ***Why a patient is getting worse after antibiotics:*** Anaphylaxis? True antibiotic failure? Wrong Dx? Brewing complication? Just need to wait some more to see the results? Toxin release (Jarisch-Herxheimer reaction)?

Hyperacute problem approach: Change in electrical activity? Is something breaking or tearing? Rapid acting molecule on board? Some tube got blocked?
Page kidney: compression of the kidney by a chronic subcapsular hematoma -> 2° HTN.