Name: Abd-Manaaf Bakere
Rotation 7: Emergency Medicine

Chief complaint: “I have been vomiting and feeling weak x 4 days”

HPI
A 61 y/o male with PMHx of HTN, T2DM, CAD, HFpEF, GERD, AF, VT/VF on ICD presents to the ED with weakness, fatigue, vomiting x 4 days. Patient reports multiple episodes of yellow emesis with nausea, abdominal discomfort and bloating, dry cough, and subjective fever/chills. Reports taking 325mg acetaminophen every 6 hours with mild relief of fever/chills. Denies use of new supplements or heavy alcohol use. Denies chest pain, shortness of breath, diarrhea, melena, rectal bleeding, dysuria, hematuria, numbness, paresthesia, headache, syncope, recent travel, or sick contacts. NKDA.

Past Medical History
Hypertension
Diabetes Mellitus Type 2
Coronary Artery disease
HFpEF
Atrial Fibrillation
V.Tach/V.Fib on ICD
Gastroesophageal Reflux disease

Past Surgical History
Meniscal surgery
PR CATH PLACEMENT & NJX CORONARY ART ANGIO IMG S&I
Procedure: Coronary Angiography;
CARDIAC CATH LAB; Service: Cardiovascular
PR INSJ/RPLCMT PERM DFB W/TRNSVNS LDS 1/DUAL CHMBR
Procedure: Implant ICD; Surgeon: Scott Bernstein, MD; Location: BELLEVUE CARDIAC CATH LAB; Service: Electrophysiology

Medications

Apixaban (ELIQUIS) 5 MG tablet
atorvastatin (LIPITOR) 40 MG tablet
bisacodyl 5 MG EC tablet
carvedilol (COREG) 12.5 MG tablet
Dapagliflozin propanediol (FARXIGA) 5 MG Tab
Evolocumab (REPATHA SURECLICK) 140 MG/ML Solution Auto-injector
folic acid (FOLVITE) 1 MG tablet
insulin glargine (BASAGLAR KWIKPEN) 100 UNIT/ML injection
insulin lispro (ADMELOG SOLOSTAR) 100 UNIT/ML injection pen
insulin pen needle 31 G X 8 mm (COMFORT EZ SHORT PEN NEEDLES) 31G X 8 MM Misc
losartan (COZAAR) 25 MG tablet
Multiple Vitamin (MULTIVITAMIN) capsule

nicotine (COMMIT) 4 MG lozenge
thiamine (VITAMIN B-1) 100 MG table
Family History
Mother: Not Available
Father: Not available
Social History
Habits - drinks caffeinated drinks
Smoking – every day cigarette nicotine
Illicit drugs - marijuana
Alcohol - Yes alcohol use of about 1.0 standard drink of alcohol per day.
Diet - beef, chicken, fish with a mixture of carbohydrates such as rice, potatoes and vegetables.
Exercise - Denies regular exercise.

Allergies/Intolerance:
N.K.D.A
Immunization
Up to date with all immunizations

Review of Systems (ROS):
General: **Admits weakness, fatigue fever**, chills. Denies weight changes, fevers, night sweats, body aches,
• Skin: denies rash, sores, lumps, itching, color changes, hair, nails
• Head:, denies headache, trauma, headache, nausea, vomiting, dizziness
• Eyes: denies glasses/contacts, pain, redness, tearing, vision loss, discharge, double/blurred vision, glaucoma
• Ears: denies hearing loss/aid, tinnitus, vertigo, earache, discharge
• Mouth/Throat: Denies hoarseness, voice change and sore throat bleeding gums, dentures, cavities,, dry mouth, difficult/painful
• Nose/Sinuses: Denies itching, stuffiness, rhinorrhea, sneezing epistaxis, allergies (perennial, seasonal)
• Neck: denies lumps/masses, goiter, pain, stiffness, swelling
• Respiratory: Admits **dry cough,**. Denies shortness of breath, wheezing, hemoptysis, pleurisy, snoring
Cardiac: Denies palpitations, chest pain, DOE, orthopnea, paroxysmal nocturnal dyspnea, syncope, lower extremity edema
• Gl: **Admits nausea, vomiting, bloating, abdominal discomfort**. Denies dysphagia, appetite, regurgitation, indigestion, bowel movement frequency/color/size/caliber, changes in bowel habits, diarrhea, constipation, bleeding (hemorrhoids, melena, hematemesis, hematochezia)
• Urinary: denies frequency, polyuria, nocturia, hesitancy, urgency, dysuria, hematuria, incontinence, reduced caliber of stream
• Vascular: claudication, edema, varicose veins, past clots
• Musculoskeletal: denies muscle or joint pain, stiffness, arthritis, gout, weakness, swelling, redness, instability
• Neurological: denies seizures, numbness, tingling, paralysis, paresthesia, fainting, blackouts, burning, tremors

• Hematological: denies anemia, easy bruising/bleeding, petechiae, purpura, ecchymosis, transfusions
• Endocrine: denies heat/cold intolerance, sweating/thirst/hunger
• Psychiatric: denies nervousness, mood, anxiety, depression or suicidal ideation.

Physical Exam
Vital Signs:
BP 101/66
Pulse 88
Temp 97.2 °F (36.2 °C)
Resp 18
SpO2 96%

Constitutional:
General: He is not in acute distress. AOx3
Appearance: He is well-developed. He is not diaphoretic.
HENT:
Head: Normocephalic and atraumatic.
Eyes:
General: **Scleral icterus present. EOM intact**
Pupils: Pupils are equal, round, and reactive to light.
Cardiovascular:
Rate and Rhythm: Normal rate and regular rhythm.
Heart sounds: Normal heart sounds, S1 and S2 appreciated. No murmur heard.
No friction rub. No gallop.
Pulmonary:
Effort: Pulmonary effort is normal. No respiratory distress.
Breath sounds: Normal breath sounds. No wheezing or rales.
Abdominal:
General: Bowel sounds are appreciateed. **There is distension.**
Palpations: **Positive dullness.** Abdomen is soft.
Tenderness: There is no abdominal tenderness. There is no right CVA tenderness, left CVA tenderness or guarding. Negative signs include Murphy's sign.
Musculoskeletal:
Cervical back: Normal range of motion and neck supple.
Skin:
General: Skin is warm and dry. **Jaundice**
Capillary Refill: Capillary refill takes less than 2 seconds.
Findings: No rash.
Neurological:
General: No focal deficit present.
Mental Status: He is alert and oriented to person, place, and time

Test/Lab/Imaging

CBC AND DIFFERENTIAL

RBC 4.49 (*)
HCT 38.5 (*)
MCHC 36.6 (*)
Neutrophil % 74.4 (*)
Lymphocyte % 18.8 (*)
Lymphocyte Abs 1.02 (*)
Monocyte Abs 0.24 (*)
NRBC Abs 0.03 (*)
NRBC % 0.6 (*)
All other components within normal limits

BASIC METABOLIC PANEL

Sodium 128 (*)
Chloride 89 (*)
Glucose 410 (*)
All other components within normal limits

HEPATIC FUNCTION PANEL -

Total Bilirubin 4.3 (*)
Direct Bilirubin 2.7 (*)
ALK PHOS 459 (*)
ALT (SGPT) 1,544 (*)
AST (SGOT) 2,092 (*)
Indirect Bilirubin 1.60 (*)

BLOOD GAS/CHEM COOX LACTATE VENOUS

PO2 Venous <30 (*)
Sodium Venous 131 (*)
Chloride Venous 97 (*)
Calcium Ionized Venous 1.15 (*)
Glucose Venous 328 (*)
Lactate Venous 2.7 (*)
Oxyhemoglobin Venous 18.5 (*)
Deoxyhemoglobin Venous 81.1 (*)
O2 Saturation Venous 18.6 (*)
TCO2 Venous 34 (*)
Base Excess Venous 7 (*)
HCO3 Venous 32 (*)
All other components within normal limits

ACETAMINOPHEN LEVEL -

Acetaminophen <10.0 (*)
All other components within normal limits

SALICYLATE LEVEL

Salicylate <0.3 (*)
All other components within normal limits

PROTIME-INR

PT 16.0 (*)
INR 1.4 (*)

All other components within normal limits

APTT

aPTT   23.8 (*)

All other components within normal limits

POC GLUCOSE CAPILLARY:

glucose poc capillary 418 (*)

All other components within normal limits

Radiology

US Liver: 9/4/2024

Impression: Enlarged liver with heterogeneous parenchyma, compatible with fatty changes or diffuse hepatocellular disease. Final report dictated by and signed

CT Abdomen Pelvis 9/4/2024

Impression: Moderate sigmoid diverticulosis. No evidence of diverticulitis. Otherwise, normal study. Final report dictated by   and signed

DX Portable Chest 1 View: 9/4/2024

Impression: No focal lung disease. Final report dictated by and signed

ECG Preliminary Results: ECG 12 Lead: 9/4/2024

Normal sinus rhythm Left posterior fascicular block Abnormal ECG

Assessment:

A 61-year-old male with a PMHx of hypertension, type 2 diabetes mellitus, coronary artery disease, heart failure with preserved ejection fraction, atrial fibrillation, and ventricular tachycardia/fibrillation with an ICD, who presents with 4 days of weakness, fatigue, and multiple episodes of yellow emesis associated with nausea, abdominal bloating, dry cough, and subjective fever/chills. Vital within normal limit. On PE, he exhibits scleral icterus, abdominal distension with dullness, and elevated liver enzymes on laboratory testing, indicative of acute liver injury. He is also found to have hyponatremia (Na 128), hyperglycemia (glucose 410), and mildly elevated lactate. Imaging studies reveal hepatomegaly with fatty changes or diffuse hepatocellular disease on ultrasound and moderate sigmoid diverticulosis without diverticulitis on CT. His ECG shows normal sinus rhythm with a left posterior fascicular block.

Differential Diagnoses:

Acute liver injury secondary to drug-induced liver injury (DILI): Elevated AST (2,092), ALT (1,544), and bilirubin levels, along with scleral icterus, point toward acute hepatocellular injury. Acetaminophen use, although his level is not acutely toxic (<10), remains a potential contributor to liver damage, especially in the context of frequent use (325 mg every 6 hours) over several days, which may have been exacerbated by pre-existing conditions such as his CAD and use of multiple medications.

Diabetic ketoacidosis (DKA)/Hyperosmolar hyperglycemic state (HHS): Elevated glucose (410), nausea, vomiting, and general weakness raise concern for a hyperglycemic crisis such as

HHS or a less severe presentation of DKA, although ketones and acidosis were not confirmed in the labs provided. His elevated glucose and dehydration (elevated lactate, dry mucus membrane and abnormal electrolytes) support this diagnosis.

Ischemic hepatitis ("shock liver"): History of HFpEF and arrhythmias, ischemic hepatitis could be considered. While his hemodynamics are relatively stable, a history of low cardiac output or a previous arrhythmic event could lead to hypoperfusion of the liver, causing acute hepatocellular injury with elevated liver enzymes and bilirubin.

Viral hepatitis or alcoholic hepatitis: although he denies heavy alcohol use, chronic low-level consumption (1 drink per day) could contribute to liver injury. Viral hepatitis should also be considered, given the patient's scleral icterus and elevated liver enzymes. Further serologic testing for hepatitis A, B, and C would be warranted to rule out infectious causes.

Plan:

Admission to hospital for further management due to acute liver injury and hyperglycemia,

IV fluids: Started IV fluid resuscitation to correct potential dehydration and electrolyte imbalances. Patient's condition improved with following
acetylcysteine (ACETADOTE) 12,240 mg in D5w 250 mL infusion Followed by
acetylcysteine (ACETADOTE) 4,080 mg in D5W 500 mL infusion ,Followed by
acetylcysteine (ACETADOTE) 8,160 mg in D5W 1,000 mL infusion
Sodium chloride 0.9 % infusion 250 mL

NPO status and GI rest, with antiemetic therapy (ondansetron) to manage vomiting.

Inpatient Management
Liver function evaluation: Order viral hepatitis panel (A, B, C), acetaminophen level recheck, and possibly autoimmune hepatitis workup.

Hyperglycemia management: Start insulin therapy to control blood sugar, with monitoring of glucose levels. Given his T2DM and significant hyperglycemia, consider starting on a sliding scale insulin regimen.

Close monitoring of electrolytes and metabolic panel, given hyponatremia

Cardiac evaluation: abnormal ECG findings (left posterior fascicular block), cardiac telemetry monitoring is necessary, and further workup by cardiology may be warranted to assess for potential ischemic events.

Continue current home medications, but hold off on hepatotoxic agents, such as acetaminophen, pending further evaluation.