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UGIB & PUD, Anticoagulation, Menopause Cases

Cynthia Lee
University of the Pacific, clee8@pacific.edu

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6 Weeks Prior to Admission (4/2/2022)

Admission H&P

CC: My stomach hurts so bad

HPI: Regina Calvarez is a 69-year-old female presenting with abdominal pain. She states that the abdominal pain started about a week ago and has gotten worse these past few days with nauseated feeling. She thought it might be heartburn but the Tums she typically took to relieve it did not work as well as before. Her pain is located around the right upper quadrant, and it has been the most painful since last night. This morning she woke up with 10/10 pain and decided to seek care. She denies any sign or symptom of bleeding.

PMH: HTN, T2DM, mitral regurgitation s/p mechanical mitral valve replacement in 2021, depression

Social History: Denies alcohol or tobacco use. Widowed and retired. Lives alone but her son lives close by and comes to check in often. Reports being in a monogamous relationship but rarely sexually active with partner due to menopausal symptoms.

Home medications:
Aspirin 81 mg PO daily
Warfarin 5 mg PO on Monday, Wednesday, Friday and 2.5 mg PO for the rest of the week
Metformin 1000 mg PO twice daily
Empagliflozin 25 mg PO daily
Amitriptyline 100 mg PO daily
Ibuprofen 200 mg q6h PRN for back pain
Amlodipine 10 mg PO daily
Lisinopril 40 mg PO daily

Vitals on arrival:
BP: 150/89 RR: 19 Weight: 189 lb
HR: 108 Temp: 37.1 C Height: 64 in

Physical Exam:
General: physical distress due to pain, A&Ox3
HEENT: normocephalic and atraumatic, pupils are equal and reactive, oropharynx and nasopharynx clear
Neck: No tenderness, masses, or stiffness
Lungs: clear to auscultation bilaterally
CV: tachycardic, RRR, no gallops or murmur
GI: soft, nontender, bowel sounds in all 4 quadrants
Genit/Rect: normal appearing external female genitalia, normal vaginal epithelium, no abnormal discharge, no palpable adnexal masses
Extremity: no cyanosis, clubbing, or distal pitting edema
Skin: no ulcerations

Assessment/Plan: Abdominal pain likely peptic ulcer disease. Will obtain urease breath test to test for *H. pylori.* Start Zofran PRN and PPI daily for symptom relief. Will monitor for observation and follow-up as outpatient if stable.

ED Discharge Summary

Admitting complaint: Abdominal pain

Discharge diagnosis: Peptic ulcer disease

Course of care: Patient presented to ED with signs and symptoms of peptic ulcer disease and was admitted for observation. Home medications include aspirin and ibuprofen. During observation, the patient was able to tolerate diet as usual. She received a dose of oral pantoprazole 40 mg and ondansetron 4 mg and symptoms have improved. Vitals are stable throughout the observation.

Past medical history: HTN, T2DM, mitral regurgitation s/p mechanical mitral valve replacement in 2021, depression

Allergies: Penicillin

Discharge Instructions: Discontinue aspirin and ibuprofen. May use Tylenol as needed for pain.

Discharge medications: Ondansetron 4 mg PO q8h PRN for N/V, pantoprazole 40 mg PO daily

Follow-up: Will call to follow-up once urea breath test resulted

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Laboratory Results and Treatment Plan Follow-up (4/4/2022)

Notified by the laboratory patient's urea breath test is positive. Called patient to notify the test result and the plan to prescribe antibiotics for *H. pylori* infection. In addition, inform patient to increase her pantoprazole to twice daily. The patient understands the plan and will pick up antibiotics to start immediately.

Prescription order:
Bismuth Subsalicylate 300 mg PO 4 times daily for 10 days
Tetracycline 500 mg PO 4 times daily for 10 days
Metronidazole 500 mg PO 4 times daily for 10 days
Pantoprazole 40 mg PO daily for 14 days

Day 1 (5/17/2022)

Admission H&P

Chief Complaint: Vomiting bright red blood.

History of Present Illness: 69 year-old female brought into the ER by ambulance after her son called 911. The son had gone to check on the patient and found her with bright red vomit on her. Patient states she started having abdominal pain and felt nauseated for the past week. She vomited this morning; the vomit had streaks of blood in it. Then after dinner, she felt lightheaded and began vomiting large amounts of bright red blood. She denies losing consciousness or hitting her head. Last bowel movement 5 days ago was normal with no sign of blood. Patient was here over 1 month ago with similar abdominal pain and tested positive for *H. pylori*. She completed 10 days of antibiotics and 14 days of Protonix. Since then she mentioned she had visited her PCP for follow-up at the end of her antibiotic course and she was told to obtain another urea breath test, which she did 2 days ago. Her PCP also decreased her warfarin dose to 2.5 mg PO daily because her INR was high at 3.9. She took her last warfarin dose with dinner today. This is the first time her warfarin dose was adjusted after being stable for almost a year.

Her vitals are unstable on admission with low BP. She reported that her BP average about 130/80 at home.

Past Medical History: PUD, *H. pylori* infection, HTN, T2DM, mitral regurgitation s/p mechanical mitral valve replacement, depression

Allergies: Penicillin (anaphylaxis)

Medications:
Warfarin 2.5 mg PO daily
Metformin 1000 mg PO twice daily
Empagliflozin 25 mg PO daily
Amitriptyline 100 mg PO daily
Amlodipine 10 mg PO daily
Lisinopril 40 mg PO daily

Physical Exam:
Vitals: BP 80/50, P 120, RR 26, SpO2 94% on room air, abdominal pain 8/10, Ht 64 inches, Wt 190 lb
General appearance: Well-developed Hispanic female, appears stated age, front of clothing covered in blood, appears to be in mild distress.
Head: Normocephalic, non-traumatic, no masses or lesions
Nose: Nares patent, no deformity, septal deviation or perforation
Throat: Pharynx non-injected, palate rises symmetrically, gag present, tonsils present
Mouth: Buccal mucosa, moist and intact, dentures present
Neck and axilla: Supple without lymphadenopathy, masses, or thyromegaly. Carotid pulses: 2+ bilaterally, no bruits, full ROM, trachea midline
Back, thorax & lungs: Chest expansion symmetric, tachypnea, clear to auscultation, no adventitious sounds
Cardiovascular: Tachycardia, regular rhythm, no systolic ejection murmur, rubs, gallops
Abdomen: Tympany to percussion in all 4 quads, bowel sounds hypoactive, palpable with distention, no hepatosplenomegaly or mass
Skin: Pale, good turgor, no lesions, redness, cyanosis, or edema; Nails without clubbing or deformities with good cap refill

Assessment/Plan:
1. Upper gastrointestinal bleeding: Transfuse 1 unit PRBC. Start IV PPI. Admit to ICU and consult GI team.
2. PUD 2/2 *H. pylori* infection: Completed course of antibiotics. Follow-up urea breath test.
3. Hypovolemia: Start IV fluids
4. Diabetes: Start insulin sliding scale.
5. Mitral regurgitation s/p mMVR: hold warfarin in the setting of GIB
6. Depression: continue home medication.

Day 2 (5/18/2022)

GI Consult Note

Reason for Consultation: GI bleeding

Chief Complaint: hematemesis

HPI: 69 year-old female with recent ED visit; history of HTN, T2DM, mitral regurgitation s/p mechanical mitral valve replacement, and depression; admitted for low hemoglobin and hematemesis. She was recently being observed in the ED for peptic ulcer disease secondary to

H. pylori and has completed a course of antibiotics. Patient has not had a bowel movement for 6 days but last BM was normal with no sign of bleeding. Patient reported her bowel movement schedule is typically 1-2 times/week. She used to have more frequent bowel movements up to when she was diagnosed with depression.

Physical Exam:
Vitals & labs: BP 119/67, P 99, T 36.7 C, pain 5/10, Hgb 7.9, INR 1.4, Plt 205,000
Abdomen: hypoactive bowel sound, hard and distended, no hepatomegaly or mass

Assessment/Plan:
1. GI bleeding: unresolved PUD. Started on IV PPI. NPO overnight. Plan for immediate EGD this morning.
2. Anemia: secondary to acute GI bleed. Currently stable after receiving 1 unit PRBC last night and continuous fluid.
3. Constipation: last BM 6 days ago. Start bowel care.

Thank you for the consult. We will continue to monitor the patient.

Inpatient Progress Note

Patient was seen at bedside. Reported better abdominal pain relief but still feeling nauseated. Denies vomiting. Patient is a little bit down as this is the first time she was hospitalized for a life-threatening event, other than her heart procedure last year. She is wondering if her health deterioration is normal during menopause. Ever since her last menstruation 5 years ago, she has developed many symptoms, including vaginal dryness, hot flashes, insomnia, and dyspareunia that caused her to be depressed. After the diagnosis of depression, things started spiraling down further with dry mouth despite adequate hydration, constipation, and difficulty in urinating. She is wondering if there is anything that would be able to help her menopausal symptoms.

Physical Exam:
Neuro: non-focal, A&Ox3
HEENT: normocephalic, atraumatic, no scleral icterus, or conjunctival injection
Neck: supple, no rigidity, no lymphadenopathy, bruits, or thyromegaly
Lungs: clear to auscultation bilaterally, no crackles or e
CV: RRR, normal S1/S2, no gallops, no jugular venous distention
GI: hard and distended, hypoactive bowel sounds, no masses
Genit/Rect: normal appearing external female genitalia, normal vaginal epithelium, no abnormal discharge, no palpable adnexal masses
Extremity: no cyanosis, clubbing, or distal pitting edema
Skin: warm and dry, no ulcerations

Assessment/Plan:
1. GI bleeding: Plan for EGD this morning per GI team note.
2. Anemia: secondary to acute GI bleed. Will continue to monitor and trend.
3. Hypovolemia: resolved. Continue fluid therapy
4. PUD 2/2 *H. pylori* infection: Follow-up urea breath test with PCP
5. Mitral regurgitation s/p mMVR: hold warfarin in the setting of GIB
6. Menopausal symptoms: consult pharmacy for treatment options
7. Constipation: Start bowel care.
8. Diabetes: Glucose elevated. Start insulin basal bolus per pharmacy.
9. Depression: Continue home medication

Urea Breath Test PCP Follow-up

Received follow-up from PCP that the urea breath test from 3 days ago resulted positive. PCP also confirmed that patient's warfarin dose was reduced to 2.5 mg PO daily on 4/14/2022 due to supratherapeutic INR.

EGD

PROCEDURE: Esophagogastroduodenoscopy with control of bleeding

INDICATIONS: Hematemesis, acute blood loss anemia

EGD DESCRIPTION: After a final discussion of the indications, technique, risks, and benefits of esophagogastroduodenoscopy and possible biopsy, all questions were answered and the patient agreed to proceed. She was placed in the left lateral decubitus position and IV sedation administered by Anesthesia. After adequate sedation 10% xylocaine oral spray was applied to the posterior pharynx, and the video gastroscope was swallowed. The gastroscope was passed through the esophagus, stomach (after gentle distension and aspiration of residual fluid), and through the pylorus to the second portion of the duodenum, and then slowly withdrawn. The bulb was carefully examined. A retroflex procedure was performed in the gastric body and fundus.

EGD FINDINGS:
ESOPHAGUS: The mucosa had no ulcers or erosions, strictures, masses, or varices.
The Z-line was located at 38 cm, regular

STOMACH: 3 ulcers noted in the prepyloric region measuring about 0.8cm to 3 cm in size. Active bleeding noted from all ulcers. 2 mL of epinephrine injected around the ulcers to prevent further bleeding. Hemoclip was applied on all oozing ulcers.

DUODENUM: The duodenal bulb and the visualized part of the duodenum (second portion of duodenum) was noted with small ulcers. No AVMs, strictures, active bleeding, or masses seen

Complications: None

IMPRESSION: 3 prepyloric oozing ulcers measuring about 0.8 cm to 3 cm in size. Status post hemostatic therapy.

RECOMMENDATIONS:
Avoid NSAIDs and aspirin.
Continue PPI.
Resume anticoagulation given mMVR. Will need bridging with heparin gtt for subtherapeutic INR.
Start clear liquid diet and advance as tolerated.
Continue to monitor hemoglobin. Transfuse as needed to keep hemoglobin more than 7.

Findings and recommendations were discussed with the patient after the procedure.

Summary of Labs/Vitals/Cultures/Glucose/Inpatient Medications:
Actual BW: 85.9 kg
IBW: 54.7 kg (BMI 32)
AdjBW: 67.2 kg

Labs:

CBC	**4/2/2022**	**5/17/2022**	**5/18/2022**
WBC (cell/ml)	7,500	9,800	8,900
Hgb (g/dl)	12.4	6.7	7.9
Hct (%)	37	21.2	23
Plt	175,000	214,000	205,000
Coagulation			
PT (s)	18	14	14
INR	3.2	1.5	1.4
Anti-Xa			0.12
CMP			
Na (mEq/l)	136	143	144
K (mEq/l)	3.8	3.9	3.8
Cl (mEq/l)	101	98	100
CO2 (mEq/l)	29	26	24
Glu (mg/dl)	198	218	225
BUN (mg/dl)	18	25	19
SCr (mg/dl)	0.89	0.7	0.8
**CrCl use IBW (ml/min)	51.5	65.5	57.3
**CrCl use AdjBW (ml/min)	63.3	80.1	70.1
Tbili (mg/dl)	0.3	0.4	
ALT (IU/l)	38	32	
AST (IU/l)	22	28	
Alkphos (IU/l)	115	102	
Urea breath test (2 days after ED visit)	Positive		
Blood type		O-	
A1C (%)		8.2	
TC		201	
LDL		112	
HDL		43	
TG		124	

**CrCl not provided, students have to calculate.

Vitals

Previous Admission

DATE	TEMPERATURE	PULSE	RESPIRATION	BLOOD PRESSURE	PULSE OXIMETRY
04/02/2022 17:55	36.9 C	87	15	128/72	100 %
04/02/2022 12:25	37.1 C	98	16	142/72	100 %
04/02/2022 10:15	37.1 C	108	19	140/79	100 %

Current admission

DATE	TEMPERATURE	PULSE	RESPIRATION	BLOOD PRESSURE	PULSE OXIMETRY
05/19/2022 12:11	37.3 C	87	17	116/78	97 %
05/19/2022 09:30	36.7 C	92	17	117/72	98 %
05/19/2022 06:10	37.2 C	89	19	108/72	98 %
05/19/2022 01:55	37.1 C	102	17	101/68	98 %
05/18/2022 22:03	36.8 C	112	24	92/65	96 %
05/18/2022 20:20	36.2 C	120	26	80/50	94 %

Scheduled Inpatient Medications:
Pantoprazole 40 mg IV BID
0.9% NaCl 100 ml/hr (fluid)
1 unit PRBC
Insulin sliding scale

Student Instructions

1. Please provide complete SOAP for the main problems with specific instructions as follows:
    a. GI bleeding/PUD: complete treatment plan for GI bleeding post-EGD and antibiotic recommendations for *H. pylori* infection
    b. Anticoagulation/Mitral regurgitation s/p mMVR: complete plan for restarting warfarin for the mMVR indication with heparin bridging in the inpatient setting (include duration of bridging)
    c. Menopause: address menopausal symptoms and provide appropriate plan
2. Please provide assessment and plan on secondary problems
3. Please review patient's course of hospitalization and recent ED visit (including appropriateness of medications initiated, monitoring during hospitalization, or any necessary follow-ups) and review appropriate clinical guidelines/literature carefully to assist in responding to the discussion questions.

Discussion Questions

1. (a) Could Regina have received clarithromycin triple therapy when she was <u>initially</u> diagnosed with *H. pylori* infection? Why or why not?

    (b) Could she have received concomitant therapy when she was <u>initially</u> diagnosed with *H. pylori* infection? Why or why not?

    (c) When should eradication be tested? Why? What tests are available?

2. (a) What is your assessment regarding Regina's supratherapeutic INR during the most recent PCP visit? What might have caused the INR to be out of range (i.e., what are the causes/risk factors) and how do these affect INR?

(b) Do you agree with the PCP's warfarin dose reduction plan (from 5 mg MWF and 2.5 mg rest of the week to 2.5 mg daily)? If not, what would you have recommended (provide rationale)?

3. (a) On this current admission for GI bleeding, is Regina indicated for warfarin reversal? Why or why not? If indicated, what is your recommendation?

   (b) How long would you anticipate before vitamin K (oral and IV) takes effect?

4. (a) What treatment dose would you recommend to bridge warfarin with enoxaparin?

   (b) How do you monitor enoxaparin and what is your goal for Regina?

   (c) In the general population, enoxaparin doesn't typically need to be monitored. What special populations might be at risk for overdosing or underdosing and require therapeutic monitoring (list at least 3)?

5. (a) Based on Regina's recent history of warfarin and INR changes and the anticipated overall plan for discharge, recommend a warfarin regimen for discharge. (Consider all factors that can affect/interact with warfarin or INR).

   (b) The purpose of bridging is to maintain anticoagulation before warfarin takes full therapeutic effect. How long does warfarin take to get to the full therapeutic effect? Why does warfarin have a delayed onset of action?

6. What is your assessment and plan for management of Regina's depression?

7. (a) What is your recommendation for initiation of basal/bolus insulin for Regina in the inpatient setting (provide rationale)?

   (b) What is your assessment, goals of therapy, and plan for **comprehensive** outpatient management of Regina's diabetes?