LEARNING OBJECTIVES

After completing this case study, the reader should be able to:

List the options for the evaluation and treatment of a patient with symptoms suggestive of peptic ulcer disease (PUD).

Identify the desired therapeutic outcomes for patients with PUD.

Identify the factors that guide selection of a *Helicobacter pylori* eradication regimen and improve adherence with the regimen.

Compare the efficacy of three- and four-drug *H. pylori* treatment regimens and regimens lasting 7, 10 and 14 days or provided in sequential order.

Create a treatment and monitoring plan for a patient diagnosed with PUD, given patient-specific information.

PATIENT PRESENTATION

Chief Complaint

“My stomach has been hurting really badly for the past month or so. It seems to get worse at night.”

HPI

Justine Ward is a 67-year-old woman who presents to her primary care physician with complaints of episodic epigastric pain for the past 6 weeks. Her pain is nonradiating. It is sometimes worse with meals, but sometimes eating helps improve the pain. She has been experiencing occasional nausea, bloating, and heartburn. She denies any change in color or frequency of bowel movements. She does not have a history of PUD or GI bleeding. She mentions that she has been having frequent headaches for the past month and has been taking naproxen sodium one to two times daily.

PMH
CAD with drug-eluting stent placement × 3 months

Hypothyroidism × 22 years

Hyperlipidemia × 10 years

Lactose intolerance × 47 years

Postmenopausal; LMP ~13 years ago

FH

Her mother died at the age of 75 from lymphoma. Her father is alive and has a history of glaucoma, prostate cancer, and AMI at age 70. She has five siblings who are alive. All siblings have a history of hypertension and hyperlipidemia.

SH

She is married and has raised three children; she is not employed outside the home. She has never smoked and drinks one to two glasses of wine most days of the week.

Meds

Plavix 75 mg PO daily

Lisinopril 5 mg PO daily

Metoprolol tartrate 25 mg PO twice daily

Aspirin 325 mg PO daily

Synthroid 125 mcg PO daily

Atorvastatin 80 mg PO daily

MVI tablet PO daily

Tums 500 mg PO PRN stomach pain

Naproxen sodium 220 mg PO PRN headache (one to two times daily for the past month)

Lactaid one tablet PO PRN dairy product consumption

All

NKDA

ROS

Unremarkable except for complaints noted above
Physical Examination

Gen
Slightly overweight woman in moderate distress

VS
BP 110/72 left arm (seated), P 99, RR 16 reg, T 37.2°C; Wt 68 kg, Ht 5’3”

Skin
Warm and dry

HEENT
Normocephalic; PERRLA; EOMI

Chest

CTA

CV
RRR; S₁ and S₂ normal; no MRG

Abd
Soft; mild epigastric tenderness; (+) BS; no splenomegaly or masses; liver size normal

Rect
Nontender; stool heme (+)

Ext
Normal ROM; no cyanosis, clubbing, or edema

Neuro
CN II–XII intact; A & O × 3

Labs

| Favorite Table | Download (.pdf) | Print |
|----------------|------------------|
| Na 142 mEq/L   | Hgb 10.1 g/dL    | Ca 9.5 mg/dL |
Assessment

Suspected PUD

QUESTIONS

Problem Identification

1.a. Identify this patient’s drug therapy problems.

1.b. What information (signs, symptoms, diagnostic tests, and laboratory values) indicates the presence of PUD?

CLINICAL COURSE (PART 1)

Justine’s PCP referred her for a nonemergent EGD, which revealed a 5.5-mm superficial ulcer in the superior duodenum. The ulcer base was clear and without evidence of active bleeding (see Fig. 35-1). In addition, inflammation of the duodenum was detected and biopsied.

FIGURE 35-1:
**Desired Outcome**

2. What are your treatment goals for treating this patient's PUD?

**Therapeutic Alternatives**

3.a. Considering the patient's presentation, what nonpharmacologic alternatives are available to treat her PUD?

3.b. In the absence of information about the presence of *H. pylori*, what pharmacologic alternatives are available to treat duodenal ulcers?

**Optimal Plan**

4. Based on the patient's presentation and the current medical assessment, design a pharmacotherapeutic regimen to treat her duodenal ulcer, anemia, and frequent headaches.

**Outcome Evaluation**

5. What clinical and laboratory parameters are necessary to evaluate therapy for achievement of the desired therapeutic outcomes and to detect or prevent adverse effects?

**Patient Education**

6. What information should be provided to the patient to ensure successful therapy, enhance compliance, and minimize adverse effects?
CLINICAL COURSE (PART 2)

At the time of the EGD, a biopsy of the duodenal mucosa was taken and indicated the presence of inflammation and abundant *H. pylori*-like organisms.

FOLLOW-UP QUESTIONS

1. What is the significance of finding *H. pylori* in the duodenal biopsy?

2. Based on this new information, how would you modify your goals for treating this patient’s PUD?

3. What pharmacotherapeutic alternatives are available to achieve the new goals?

4. Design a pharmacotherapeutic regimen for this patient’s ulcer that will accomplish the new treatment goals.

5. How should the PUD therapy you recommended be monitored for efficacy and adverse effects?

6. What information should be provided to the patient about her therapy?

7. How should her frequent headaches now be treated?

SELF-STUDY ASSIGNMENTS

1. Describe the advantages and limitations of both endoscopic and nonendoscopic diagnostic tests to detect *H. pylori*.

2. After performing a literature search on *H. pylori* eradication therapy, compare the efficacy of three- and four-drug regimens.

3. Based on the literature search on *H. pylori* eradication therapy, determine whether therapy should be continued for 7–14 days or provided in a sequential order.

4. Describe the role of pharmacists and nurse practitioners in treating patients with PUD.

CLINICAL PEARL

Rapid urease breath tests for diagnosis of *H. pylori* should not be used for patients who have received bismuth-containing medications, proton pump inhibitors, or antimicrobials within the previous 4 weeks due to the increased risk of a false-negative result.

REFERENCES


