

Pathophysiology & Pharmacology II Case Study Template

Name:

Date:

Date Patient was admitted:

Date(s) you cared for the patient:

Patient Presentation:

J.B. is a 78 year old white male patient who came to the ER with a complaint of abdominal pain and hematochezia.

Symptoms and History:

His symptoms were...

Physical Exam:

Vital signs: and Significant exam findings.

Labs and Diagnostic tests:

ER or admitting labs as well as current trends. Copy all labs, not only the abnormal ones. Summarize diagnostic test findings such as X-rays, MRIs, etc. You **must** type in this information. Additionally, do not try to pad your case study by putting in multiple paragraphs here. So, for example, you will put:

Chest X-Ray (date): Infiltrates left lower lobe, indicative of pneumonia.

You will not copy the entire report.

Past Medical History

1. Coronary Artery Disease
2. Osteoarthritis
3. Etc.

Medical Care Plan

Patient was admitted with a diagnosis of GI bleed and anemia. Patient will have colonoscopy and medical management of anemia. Discontinue aspirin.

List of medications. (Medication, dosage, route, schedule)

1. Protonix (pantoprazole) 40 mg PO daily
2. Morphine 1-2 mg IV Q 4-6 hours PRN
3. Include electrolytes and IV fluids

Analysis of Pathophysiology:

Up to this point, you should not have interpreted anything, only reported. Now is the time to analyze the patient. Discuss each disease process' pathophysiology. For diseases that we have not covered, you can be relatively brief. **Every symptom and abnormal lab should be addressed.** If the implications of an abnormal lab value are not known (i.e., the diagnosis is unclear) then explain one or more plausible explanations.

1. Disease process: description, general symptoms, how do we know this patient has it? What s/s does he have?
2. If an abnormal lab value has no corresponding disease, for example, a patient has low sodium: Hyponatremia: low blood sodium can be caused by...In this patient, hyponatremia could be caused by...Hyponatremia causes these symptoms...and the patient does or does not have...
3. Example: **Anemia** is a decrease in the oxygen carrying capability of blood due to decreased quantity or quality of erythrocytes and/or hemoglobin. The diagnosis of anemia was made by... Lab values MCV, MCH are indicative of xxxx-cytic xxxx-chromic anemia consistent with iron deficiency. The anemia is most likely secondary to the patient's gastrointestinal bleeding. The patient's fatigue and tachycardia is consistent with anemia, but the patient did not have pallor or...
4. GI bleeding: ...
5. The key to getting a good grade is seeing the big picture and thoroughness. You don't have to have all the answers, but you had better have all the questions.

Analysis of Medications

Relate each medication to the patient's disease process or symptoms. Be sure to explain how the medications relate to the medical plan of care.

1. Protonix is a proton pump inhibitor. It lowers acid secretions in the stomach to protect against ulcers. It is being given because the GI bleed might have been caused by an ulcer, and protonix will help prevent further damage and heal existing damage.
2. Morphine is a narcotic analgesic that blocks pain reception by activating opiate receptors in the Central Nervous System. It is given on an "as needed" basis. When I cared for the patient he indicated a pain level of 5/10 and asked for morphine several times. It was not given because his respiratory rate was 8 breaths per minute, and morphine can further depress respiratory rate. Morphine can also cause constipation, euphoria, nausea, and itching, the patient did not have any of these adverse effects
3. Medications that we have not covered for diseases that we have not covered, such as blood pressure medications should be shorter than for medications and diseases that we have covered, i.e. Aspirin was discontinued because it could possibly have contributed to the patient's GI bleed. The patient was on aspirin to help prevent heart attacks, as he has a history of previous myocardial infarction.)

Case Study Instructions

The case study is worth 20% of your final grade. You will select a real patient from your practicum experience. You will present the patient's history and medications. You will then relate the patient's medications and clinical manifestations to the pathophysiology of their diseases. You should preferably choose a patient who has had a disease process that we have covered in class such as Diabetes, hypertension, renal disease, endocrine disorders, respiratory disease, immunocompromise, inflammation, infection, pain, electrolyte imbalances, anemia, and/or clotting problems.

Choosing a patient: In general, the patient should have at least three disease processes to meet the complexity requirement (20% of grade). It is also possible to have a very complex patient who does not have three separate disease processes, such as a young cancer patient undergoing chemotherapy and radiation. You may choose a psychiatric patient to write about, however, you may not write about the psychiatric illness as the topic. For example, a psychiatric patient admitted for depression and suicidal ideation who has hypothyroid, diabetes, and hypertension might be a good candidate.

Use the template above to complete the assignment. There is no page limit, minimum or maximum. Take as many or as few as it takes to complete the history and analysis. There are no extra points for being verbose. You must convince me that you understand at an intermediate level how the disease is affecting the patient, and how the medications are affecting the disease and its manifestations.

The assignment will be graded as follows:

Patient Presentation

History & Physical Exam	10%
Labs/Medical Plan	10%

Pathophysiology Analysis

Thoroughness	10%
Understand pathology	20%
Relate pathology to manifestations	10%

Medications Analysis

Thoroughness	10%
Understand pharmacology	20%
Relate pharmacology to pathophys	10%