

CASE STUDY I

DIVERTICULAR DISEASE AND COLOSTOMY

I. ASSESSMENT

A. Historical Information

- Mr. Gonzalez is a 68-year-old Hispanic male with a family history of coronary heart disease and cancer. His brother died of a MI at age 72, and his father had two MIs before dying of a stroke at age 70. His mother died of intestinal cancer at the age of 81.
- Mr. Gonzalez is 5ft 7in, weighs 208 lbs and is fairly healthy overall. He takes Lisinopril to help control his blood pressure and decrease his risk of experiencing a MI.
- Beginning approximately a year ago (and continuously increasing in frequency), Mr. Gonzalez began to experience episodes of abdominal discomfort, increased flatus and colicky pains around his LLQ, which would generally last a few days before passing. During this time, Mr. Gonzalez began to experience problems with constipation and an increased sensitivity to certain foods (chili with beans, certain vegetables) and bouts of severe pain and flatus upon their consumption.
- About a month ago, Mr. Gonzalez experienced an episode which was more vehement than previous episodes and consisted of: severe pain and tenderness in the LLQ of his abdomen, a temperature of 100 degrees and diarrhea which continued for three days. Mr. Gonzalez went to the doctor who prescribed ampicillin. A BE determined that he had diverticulosis in his sigmoid and descending colon. He was given more ampicillin, placed on a low fiber diet and then after talking with the clinical dietitian, he was released with a scheduled re-check.
- When he began to feel better, Mr. Gonzalez stopped following his prescribed diet including: stopping his stool volume expanders, and decreasing his fluid consumption. While he continued to have constipation, diarrhea and pain in the LLQ of his abdomen, he did not associate the problems with diverticulitis.
- Mr. Gonzalez went to the emergency room following another severe episode, which was exacerbated when he consumed a whole bag of popcorn resulting in severe cramps, flatus, weakness and eventually diarrhea along with large amounts of blood. In the ER, he was examined and found to be bleeding slightly from his rectum. He was immediately admitted for observations and testing.

B. Anthropometric Measurements

IBW: $106\text{lbs} + (6 \times 7) = 106\text{lbs} + 42 = 148\text{lbs}$

IBW range: $(148\text{lbs}) \pm (10\%) = 133.2\text{lbs}$ to 162.8lbs

%IBW: $208\text{lbs} / 148\text{lbs} = 141\%\text{IBW}$

BMI: $208 \times 703 / (67)^2 = 146224 / 4489 = 32.6$

At 141% of his IBW and with a BMI of 32.6, Mr. Gonzalez would be considered obese.

C. Biochemical Measurements

| <u>Test</u> | <u>Result</u> | <u>Normal</u> | <u>Test</u> | <u>Result</u> | <u>Normal</u> |
|-------------|---------------|------------------|--------------|--|---------------------------------|
| Hgb | 11g/dl | 14-18g/dl | BUN | 12mg/dl | 7-25mg/dl |
| Hct | 33% | 42%-52% | Creat | 0.9mg/dl | 0.6-1.3mg/dl |
| K+ | 3.4 mEq/L | 3.5-5.0mEq/L | Cl- | 97mEq/L | 98-106mEq/L |
| Na+ | 133mEq/L | 136- 145mEq/L | WBC | 13 X 10 ³ /mm ³ | 5,000- 10,000mm ³ |

Mr. Gonzalez's Hgb and Hct levels are low due to the loss of blood he experienced in his stool. His electrolytes (K+, Na+, and Cl-) are low because he has had diarrhea and therefore a large loss of fluid and electrolytes in the last couple of days. Mr. Gonzalez's WBC count is a lot higher than normal, because his body has been fighting a fairly severe infection in his colon for quite a while.

D. Drug-Nutrient Interactions

Two drugs are being used to treat Mr. Gonzalez- Lisinopril and Ampicillin.

-Lisinopril is a medication used for lowering blood pressure, for treating congestive heart failure, and for lowering the risk of death associated with myocardial infarction. People who use salt substitutes, which contain potassium in addition to taking Lisinopril, may experience adverse side effects. Lisinopril may also cause side effects like diarrhea, nausea, dizziness or rapid weight gain in some individuals.

-Ampicillin is an antibiotic, or a medication that is used to treat bacterial infections. This particular antibiotic has the potential to cause watery or bloody diarrhea in some individuals.

II. DIAGNOSIS

Food and nutrition-related knowledge deficit (NB-1.1) related to lack of education and possible misunderstanding of the severity of his condition, as evidenced by patient's limited adherence to nutrition related recommendations (NB-1.6).

Limited adherence to nutrition related recommendations (NB-1.6), related to possible reluctance to diet/ lifestyle change (NB-1.3), as evidenced by patient's undesirable food choices (NB-1.7) including: inadequate fluid intake (NI-3.1) and not consuming prescribed stool volume expanders.

I. INTERVENTION

Mr. Gonzalez first needs to be educated on the causes and severity of diverticulitis, so that he has a better understanding of the condition, and what he can do to help himself heal and prevent future recurrences or complications. Mr. Gonzalez also needs to be educated on his colostomy, the nutritional implications he might face because of his colostomy, and what he needs to do differently to keep himself healthy and keep his GI tract functioning properly.

Immediately following his colostomy, Mr. Gonzalez will be placed on an NPO diet, followed by a liquid diet and then a bland, low fiber, low residue diet free of stringy foods and foods with tough skins for eight weeks to prevent obstructions and promote healing of the stoma. New foods should gradually be introduced to ensure tolerance, and foods should be eaten slowly and chewed thoroughly to prevent obstructions and flatus. If Mr. Gonzalez is worried about cutting down on odors that may occur with a colostomy, he should try consuming yogurt, parsley or buttermilk.

Mr. Gonzalez has a family history of CHD, so his long-term dietary goals should focus on keeping his consumption of saturated fats and cholesterol low. He should also make it a goal to consume plenty of fruits, veggies, whole grains and other high-fiber foods for not only the health of his heart GI tract, but also for the prevention of cancer. Mr. Gonzalez experienced some food sensitivities during the time of his episodes, and while these sensitivities may have been due to his diverticulitis, he should continue to be careful when eating these and other potentially irritating foods so that he does not experience the pain, diarrhea and other symptoms again.

I think it is going to be important to provide Mr. Gonzalez with some educational information on diverticulitis, and his colostomy, which he would be able to reference in case he was unclear on some of the information. I think its also important to provide him with a list

of foods that he should avoid and a list of foods he should try to incorporate into his diet to help him heal and maintain a healthy GI tract.

I. MONITORING AND EVALUATION

Mr. Gonzalez's lab values should be monitored to make sure that he is healing properly, his infection is completely gone, his nutritional needs are being met, and he is no longer losing blood in his stool. When Mr. Gonzalez's lab values were taken, his Hgb and Hct levels were low due to the fact that he was losing blood in his stool. To make sure that the bleeding has completely stopped and that his levels are back to normal, his Hgb and Hct levels should be monitored closely. Mr. Gonzalez's electrolyte levels were low when he when the lab values were taken because he was experiencing diarrhea. While this initial cause should no longer be a problem, he may have impaired fluid and electrolyte absorption because a significant portion of his colon was removed. His electrolyte levels should be monitored to ensure he is properly hydrated and that his electrolyte levels are adequate for various bodily functions. When his lab values were taken in the ER, Mr. Gonzalez's WBC count was extremely high due to his severe diverticulitis. To ensure that his infection is healing, his WBC count should be monitored and should be considerably lower than it was initially.