

Gastroesophageal Reflux Disease (GERD)

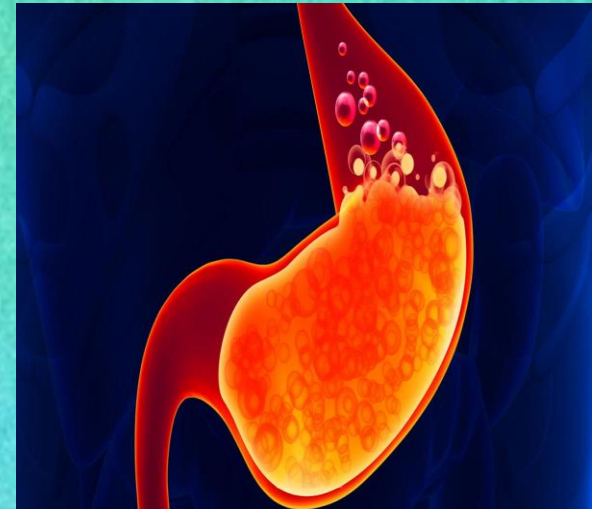
Mosammat I. Jahan

NR565: Advanced Pharmacology Fundamentals

Chamberlain College of Nursing

Dr. Jeanette Hartshorn

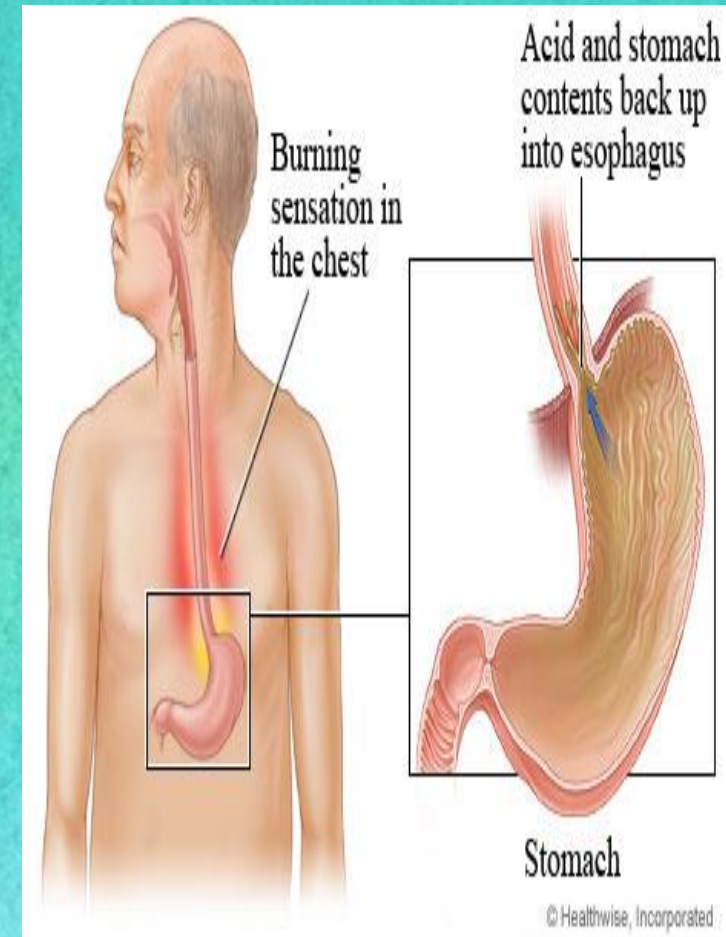
October 4, 2020



[This Photo](#) by Unknown Author is licensed under
[CC BY](#)

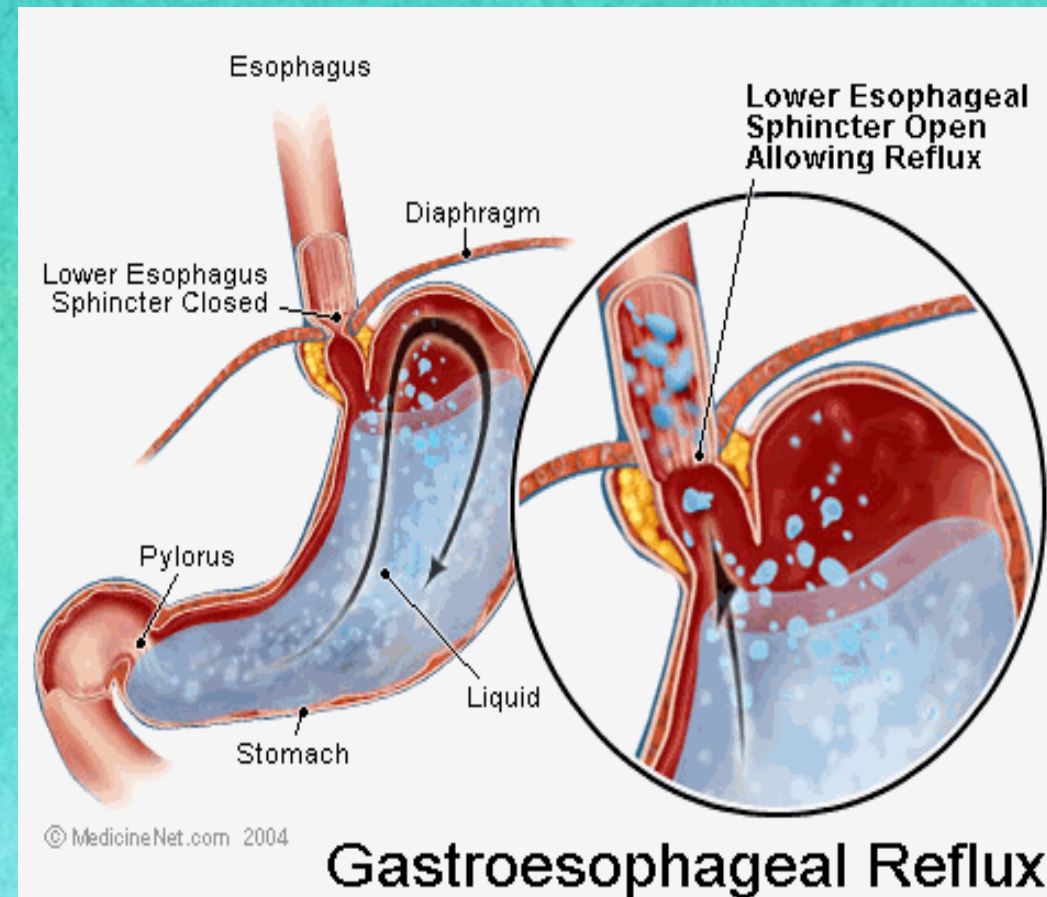
Case Study

Mr. Abdul, 50 years old, came to the primary care office with an unrelieved gastric problem. He complained about heart burning, acid taste, and sometimes vomiting. He has no comorbidity, BMI 29, and smoker (30 years). No past medical history. Family history, his mom died of breast cancer, and dad died of a heart attack when both around 60 years old. He socially drinks alcohol. Physical exam findings are epigastric tenderness, heart, and lung sound within a limit. His complete blood count and complete metabolic panel test result within the limit. No known allergies for him and he only takes over the counter antacid for heartburn when he needed.



Description of Disease

According to Woo and Robinson (2015), GERD is a chronic gastroesophageal problem. When the stomach produces acid, and it overflows to the esophagus that causes the burning symptom. After a meal, it can cause chest pain, cough, and vomiting. When patients sit up, that gives more comfort but laying down complicates the situation (Sandhu & Fass, 2018).



Epidemiology

- In North America, GERD is a common disease
- Around 18.1% to 27.8% people have GERD
- 15 million experience acid reflex every day
- Elderly and pregnant women suffer more

(ACG, 2020; Sandhu & Fass, 2018)

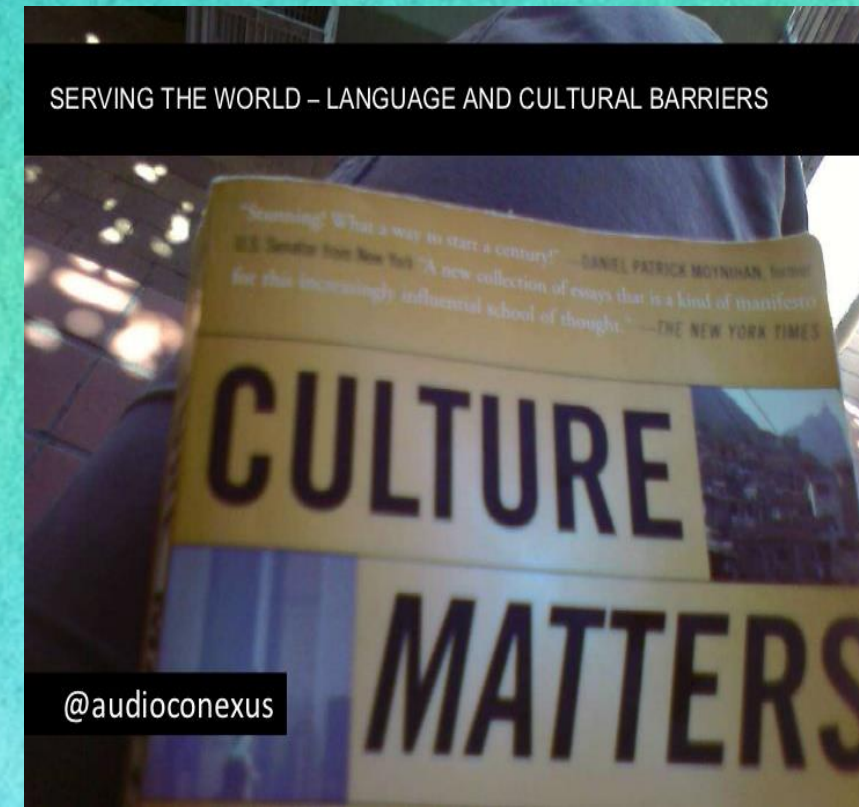


This Photo by Unknown Author is licensed under [CC BY-SA](#)

Barriers to Provide Care

- Socioeconomic situation
- Culture barriers
- Language barriers

(Vanderbilt et al., 2016)



SERVING THE WORLD – LANGUAGE AND CULTURAL BARRIERS

@audioconexus

Signs and symptoms for GERD

- Heart burn
- Vomiting
- Burping
- Cough
- Nausea
- Distending
- Acidic taste
- Hoarseness
- throat discomforts
- Wheezing
- sleep interruptions
- Abdominal pain

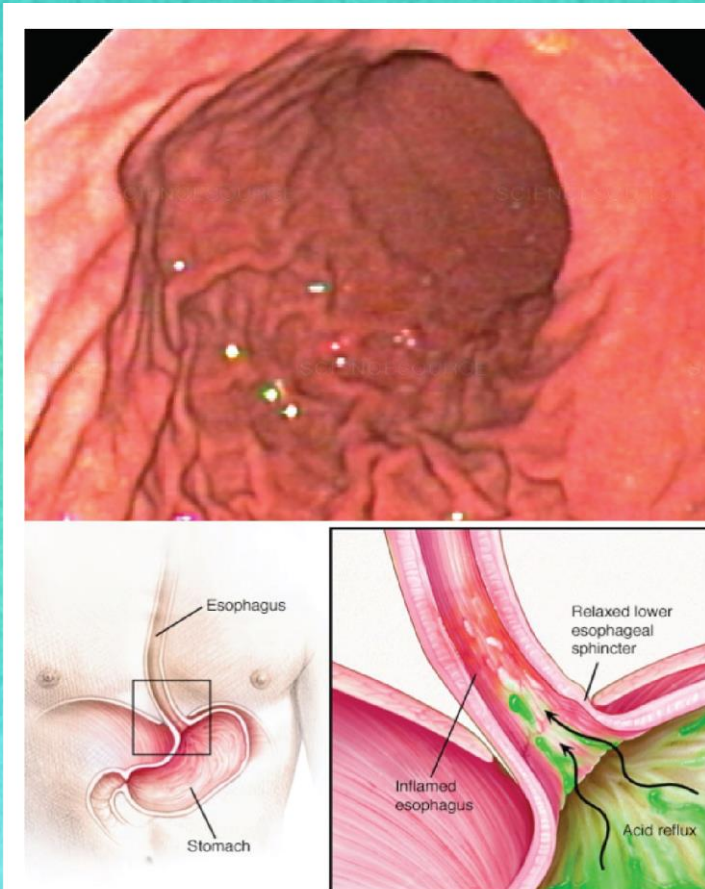
(ACG, 2020; Dunbar et al., 2016; Sandhu & Fass, 2018)



Pathophysiology of GERD

- GERD happens due to the reflux of chyme to esophagus
- Lower esophageal sphincter (LES) not functional
- Gastric acid destroys esophagus lining
- It can cause Barrett's Esophagus
- It can cause cancer

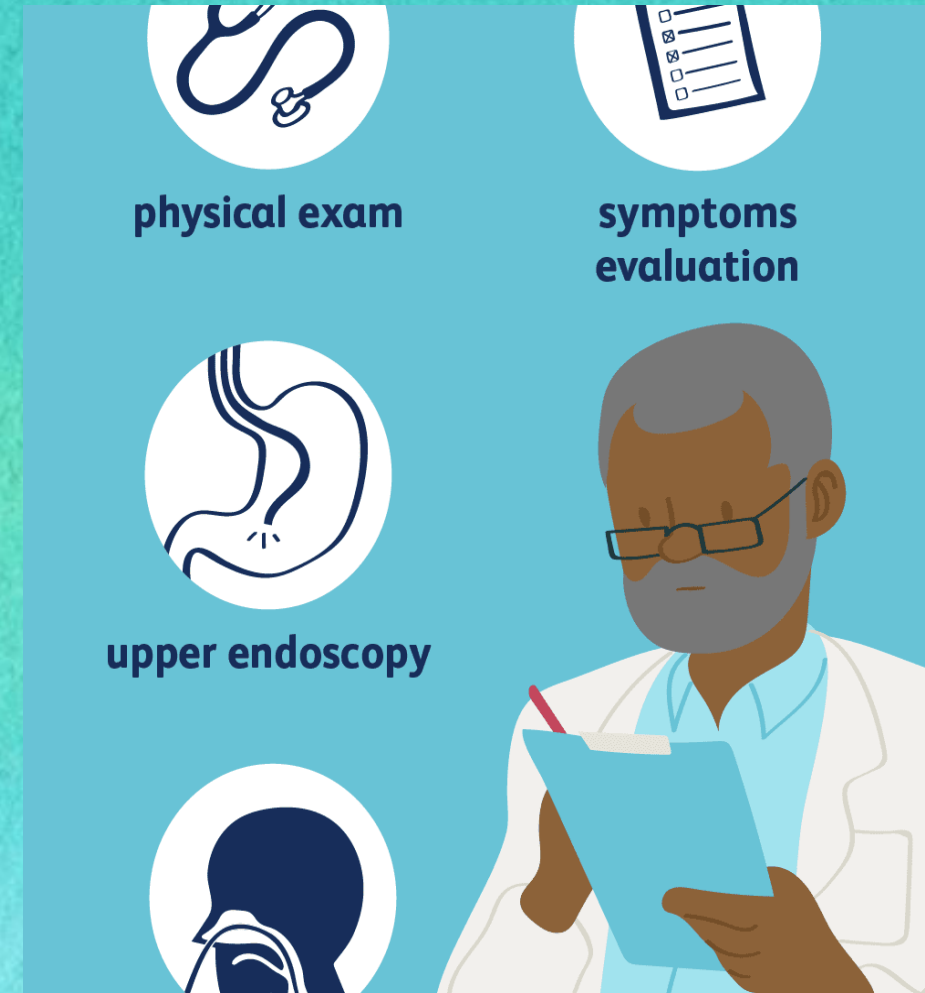
(ACG, 2020; Dunbar et al., 2016; Woo & Robinson, 2015)



Diagnosis

- Physical assessment
- Upper GI Series
- Endoscopy
- Esophageal Manometry

(ACG, 2020; Dunbar et al., 2016; Sandhu, D. & Fass, 2018).



Causes for GERD

- Obesity
- Smoking
- Food habits
- Side effects of medication
- LES nonfunctional
- Sliding hiatal hernia

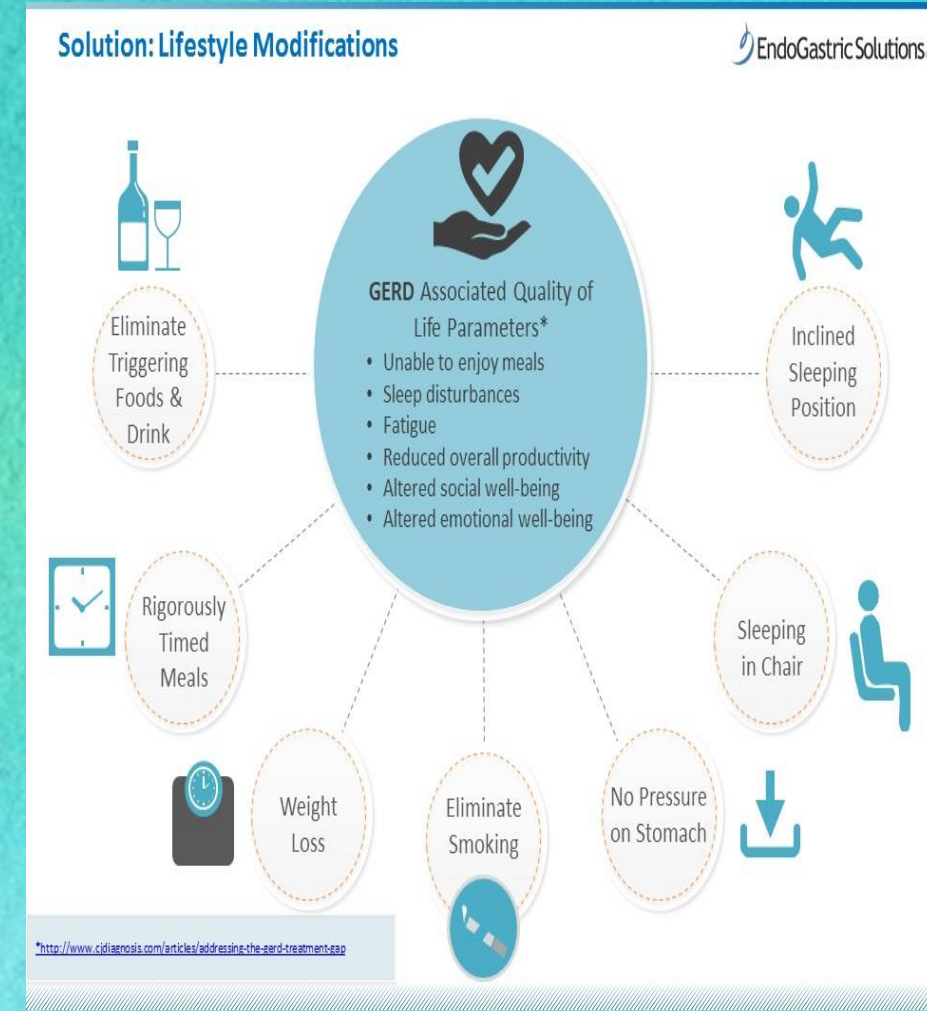
(ACG, 2020; Dunbar et al., 2016)



Non-Pharmacological Intervention

- Lifestyle modifications
- Stop alcohol and smoke consumption
- Keeping a diary about what you eat
- when you eat and how you feel
- Lie down after three hours of meal
- Weight management

(ACG, 2020; Dunbar et al., 2016)



Pharmacological Intervention

- Proton pump inhibitor (PPI) is First line treatment for GERD
- Protonix (Pantoprazole sodium) 40 milligrams (mg)
- once a day by mouth for up to 8 weeks
- Side effects bone fractures for long term use
- Adverse effects headache, diarrhea, nausea, abdominal pain
- Contraindications with rilpivirine and benzimidazoles

(FDA, 2019; Leiman et al., 2017; Sandhu & Fass, 2018).



Pharmacological Management

- Famotidine (Pepcid) is a H₂ blockers
- It can be use as 2nd line treatment for GERD
- Dosage by mouth 20 mg twice daily for up to 6 weeks
- Side effects- headache, dizziness, constipation, and diarrhea
- Interaction with Osamprenavir and Tizanidine
- Adverse effects confusion, hallucinations, agitation, and seizure

(Dunbar et al., 2016; Drugs.com, 2020; Triadafilopoulos & Azagury, 2016)



Invasive Procedure

GERD treatment with endoscopic and laparoscopic

- Nissen fundoplication
- Magnetic sphincter augmentation
- LES electrical stimulation
- Anti-reflux mucosectomy
- Laparoscopic Roux-en-Y gastric bypass

(ACG, 2020; Triadafilopoulos & Azagury, 2016)

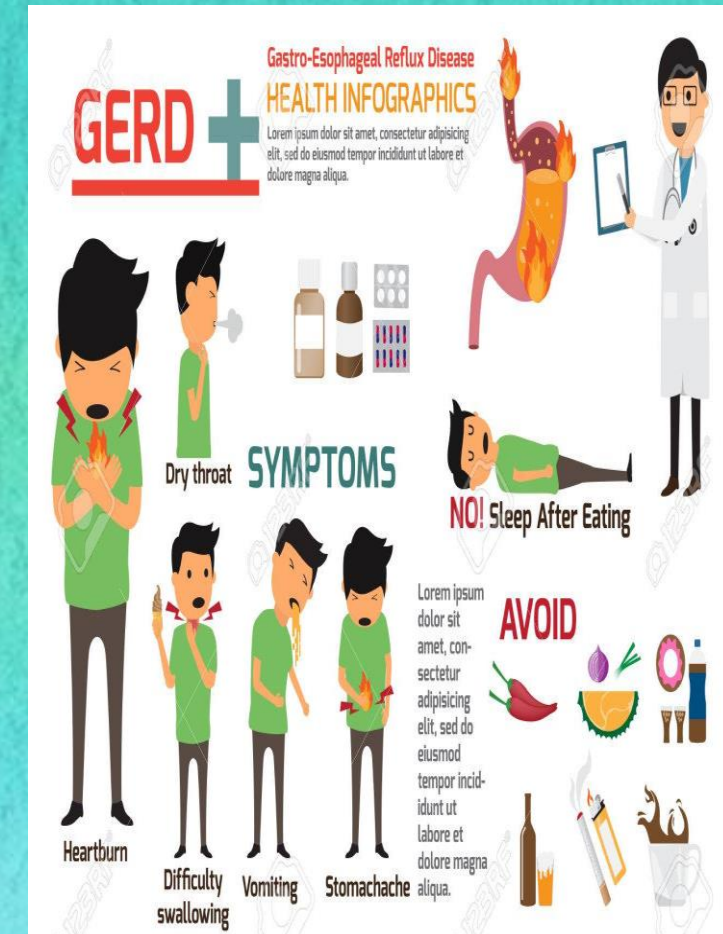


[This Photo](#) by Unknown Author is licensed under [CC BY](#)

Educate Patient

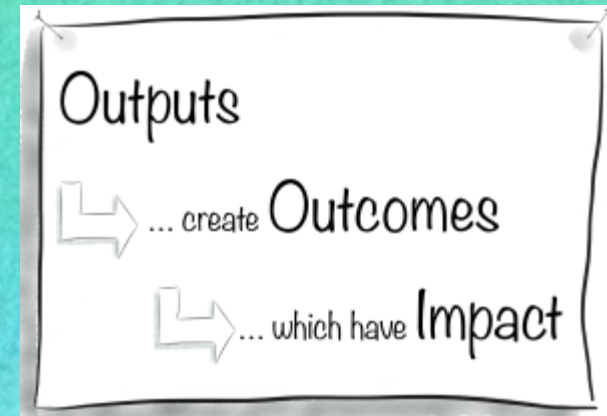
- Educate Patient for better outcome
- Disease process and print hand out
- Medication side effects
- Medication dosages and time
- Lifestyles change and exercise
- Follow up appointment

(ACG, 2020; Dunbar et al., 2016)



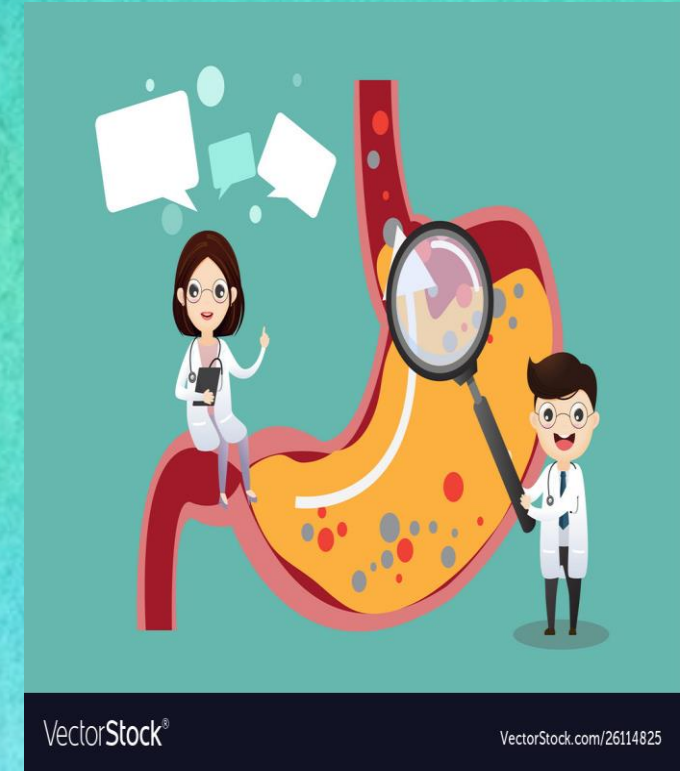
Outcome

- Patient came to follow up
- He mentioned symptom relieved
- Patient lost five pounds weight
- Working on stop smoking
- Provide resource for support situation



Summary

- GERD is esophagogastric disease
- It needs lifestyle change
- Medications can be helpful
- Watch for medication side effects
- Referral can be given for evaluation
- Patient needs education
- Holistic care improve over condition



Questions Regarding GERD

Select all that apply

What are causes for GERD?

1. Obesity
2. Smoking
3. Healthy lifestyle
4. Alcohol consumes



Questions Regarding GERD

How to diagnosis the GERD?

1. Physical Assessment
2. Endoscopy
3. Biopsy
4. MRI

When to go bed after meal with GERD?

1. Right way
2. 5 to 6 hours
3. 2 to 3 hours
4. 0 to 1 hour

Questions Regarding GERD

What are treatments for GERD?

1. Medication such as Aspirin and Aleve
2. Over the counter supplement such as St. John Wart
3. Over the counter antacid
4. Medication such as Famotidine and Protonix

What is Proton pump inhibitors (PPI) side effects?

1. Hair loss
2. Osteoporosis
3. Poly in fundic gland
4. Weight gain

References

- American College of Gastroenterology (ACG) (2020). GERD. Retrieve from <https://gi.org/topics/acid-reflux/>.
- Drugs.com (2020). Famotidine. Retrieve from <https://www.drugs.com/monograph/famotidine.html>.
- Dunbar, K., Agoston, A., Odze, R., et al. (2016). Association of Acute Gastroesophageal Reflux Disease with Esophageal Histologic Changes. *The Journal of the American Medical Association*, 315(19), 2104–2112. doi:10.1001/jama.2016.5657.
- Leiman, D., Riff, B., Morgan, S., Metz, D., Falk, G., French, B., Umscheid, C., Lewis, J. (2017). Alginate therapy is effective treatment for GERD symptoms: a systematic review and meta-analysis. *Diseases of the Esophagus*, 30, 1–9. DOI: 10.1093/dote/dow020.
- Triadafilopoulos, G., & Azagury, D. (2016). How can we deal with the GERD treatment gap? *Annals of the New York Academy of Sciences*, 1381(1), 14-20. doi:10.1111/nyas.13104.

References

Sandhu, D. & Fass, R. (2018). Current Trends in the Management of Gastroesophageal Reflux Disease. *Gut and Liver*, 12(1), 7-16. <https://doi.org/10.5009/gnl16615>.

U.S. Food and Drug Administration (2019). Medication Guides. Protonix. https://www.accessdata.fda.gov/drugsatfda_docs/label/2019/020987s055,022020s0171bl.pdf#page=33.

Vanderbilt, A., Mayer, S., Peterfy, E., Crossman, S., & Phipps, L. B. (2016). Patient-centeredness and empathy in a bilingual interprofessional primary care teaching clinic: A pilot study. *Journal of Multidisciplinary Healthcare*, 9, 395-400. doi:10.2147/jmdh.s107851.

Woo, T. & Robinson, M. (2015). *Pharmacotherapeutics For Advanced Practice Nurse Prescribers*, (4th ed) (VitalSource Bookshelf version). Retrieved from vbk://9780803658110.