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Gastroesophageal Reflux Disease

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Gastroesophageal Reflux Disease

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Introduction

Gastroesophageal reflux disease (GERD) is a disease that causes pain and erosion of the esophagus. It has a prevalence rate of 15 to 20 percent worldwide (Akiyama et al., 2018). It not only effects a patient's quality of life but also has a significant economic burden. The burden of GERD in the United States can reach up to 10 billion dollars per year when combining direct and indirect costs (Menezes & Herbella, 2017). GERD is considered a multifactorial disease (Bohmer & Schumacher, 2016). GERD is considered a multifactorial disease (Bohmer & Schumacher, 2016).

Gastroesophageal reflux disease was chosen because of its increasing prevalence in the family nurse practitioners patient population. This is a disease that can reduce a patient's quality of life significantly, but it is not routinely thought of as a debilitating disease. It has an interesting multifactorial pathology and treatment plans should be based upon the identified contributing pathologies to provide the best outcomes for the patients. In addition to medication and surgical treatments, the family nurse practitioner can counsel the patient on lifestyle changes that can reduce the effect that gastroesophageal reflux disease has on quality of life. Family nurse practitioners need to focus on preventing gastroesophageal reflux disease from progressing to Barrett's esophagus or esophageal adenocarcinoma and monitoring patients for these diseases.

Signs and Symptoms

- Acid regurgitation (Singeap et al., 2020)
- Retrosternal burning sensation (Singeap et al., 2020)
- Chest pain (Singeap et al., 2020)
- Laryngitis (Singeap et al., 2020)
- Asthma (Singeap et al., 2020)
- Chronic cough (Singeap et al., 2020)
- Dental erosions (Singeap et al., 2020)

Underlying Pathophysiology

GERD is a multifactorial disease that can be caused by any combination of the following pathophysiologies:

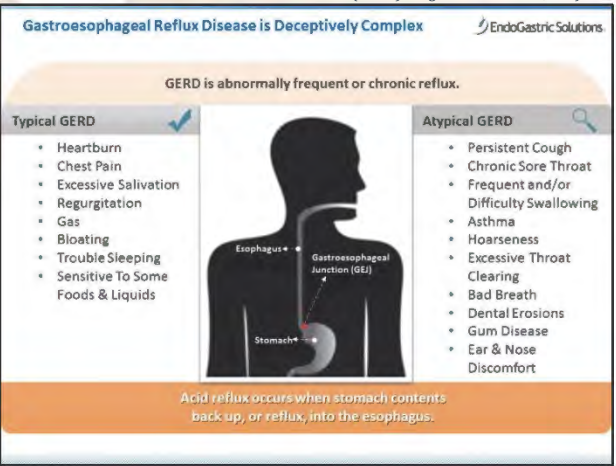
- Defective valve at the esophagogastric junction (Menezes & Herbella, 2017)
- Transient lower esophageal sphincter relaxation (Bashashati et al., 2016)
- Low esophagogastric junction contractile integrated pressure (Bashashati et al., 2016)
- Increased transdiaphragmatic pressure gradient that overcomes the valve at the esophagogastric junction causes the acid to seep into the esophagus (Menezes & Herbella, 2017)
- Increased distensibility of esophagogastric junction (Bashashati et al., 2016)
- Delayed gastric emptying (Bashashati et al., 2016)
- Disturbed esophageal acid clearance (Bashashati et al., 2016)
- Hiatal sliding hernia (Bashashati et al., 2016)
- Risk increases as BMI increases for people of European descent (Bohmer & Schumacher, 2016)

Significance of Pathophysiology

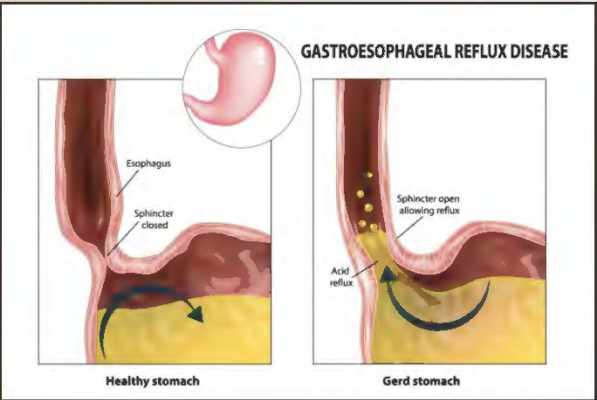
GERD is a disease with an estimated global prevalence of 10-20%. It has a multifactorial pathophysiology with both typical and atypical presentations in patients. Understanding what can cause GERD allows for practitioners to identify patients that are at risk and screen and treat for GERD in a timely manner to avoid complications. Left untreated, GERD can lead to esophagitis, benign esophageal stenosis, esophageal ulcers, upper digestive hemorrhage, Barret's esophagus and esophageal adenocarcinoma (Singeap et al., 2020). Understanding the severity of the disease is imperative for both the patient's and medical practitioners. It can have devastating effects if not properly treated and can significantly impact a patient's quality of life.



Arrows in picture depict ulcers that were caused by repeated reflux (Gastroesophageal Reflux Disease (GERD) - Digestive Disorders, n.d.)



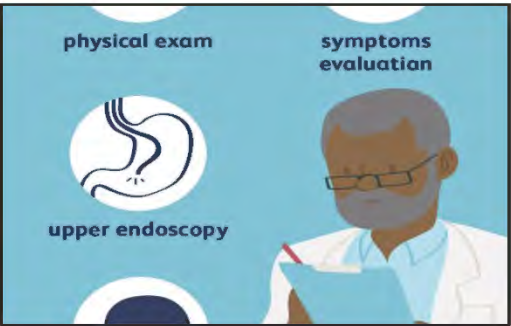
(GERD Symptoms: Signs of Acid Reflux Disease, n.d.)



(Gastroesophageal Reflux Disease (or GERD) - Gastroenterologist in Flemington & Hillsborough, NJ, n.d.)

Nursing Implications

- It is essential that nurses familiarize themselves with both a typical and atypical presentation of GERD.
- Because it effects 20% of the population many patients will have this disease.
- Nurses need to educate patients on how best to prevent and control GERD.
 - Risks can be reduced with proper diet and exercise to prevent obesity, a known risk factor.
 - Small, frequent meals may help control symptoms.
 - Educate patients to sleep with their head slightly elevated.
 - Educate patients to avoid foods that exacerbate their symptoms such as spicy foods.
- Educate patients to seek treatment for any GERD symptoms.
- Educate patients to follow their medication regimen to prevent complications of GERD.
- 1/3 of patients will not respond to initial treatments and will require further medical care (Akiyama et al., 2018).



(How Gastroesophageal Reflux Disease (GERD) Is Diagnosed, n.d.)

Treatments

Treatment for GERD has several different options. It will tend to follow a linear pattern, first approach, second approach and so on.

- Proton Pump Inhibitors (PPI) First-line approach when treating GERD (Akiyama et al., 2018)
- Treats by suppressing acid production (Akiyama et al., 2018)
- PPI treatment should continue for 8 weeks (Singeap et al., 2020)
- Ambulatory Reflux Monitoring
 - Used to diagnose failure of PPI treatment with continuing acid reflux, appropriate acid control but continuing symptomatic nonacid reflux or no abnormal reflux (Akiyama et al., 2018)
- Vonoprazan
 - Active potassium competitive acid blocker (Akiyama et al., 2018)
 - Recent studies show it is effective for patients with GERD refractory to standard PPI therapy (Akiyama et al., 2018)
- Alginate-Based Therapy
 - Treat reflux disease though a physical mechanism (Singeap et al., 2020)
 - Creates a low-density viscous gel when it reacts to sodium bicarb in saliva (Singeap et al., 2020)
 - Floats on the surface of the gastric pool creating a mechanical barrier (Singeap et al., 2020)
 - Recommended in conjunction with PPI's for patients with incipient symptomatology (Singeap et al., 2020)
- Laparoscopic Anti-Reflux Surgery
 - Effective if EGJ disruption is present (Akiyama et al., 2018)

Conclusions

GERD is a very prevalent disease. It is a multifactorial disease that is caused when acid from the stomach refluxes into the esophagus through a defective valve at the esophagogastric junction or through improper pressure gradients. This disease can be exacerbated by a hiatal hernia or through obesity. Nurse practitioners will treat many patients that are affected by this disease. It can affect that patient's quality of life, so it is essential that nurse practitioners work to prevent and treat GERD. Patients with GERD will exhibit symptoms such as acid regurgitation, chest pain and chronic cough (Singeap et al., 2020). If GERD is left untreated it can have devastating effects. It can lead to conditions such as Barret's esophagus and esophageal adenocarcinoma (Singeap et al., 2020). It has many implications for nursing care. It requires that nurses are aware of the disease pathophysiology, signs, and symptoms so that they can identify and treat GERD in their patients. They need to be aware of education that should take place for the patient regarding treatments and symptom management. There are treatments such as PPI therapy, alginate therapy and laparoscopic anti-reflux surgery that may be used depending on the patient's presentation. This is a disease that can be managed through treatment and lifestyle changes.

References



Additional Sources

