Gastro- esophageal reflux disease research paper

Health & Medicine, Drugs

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Abstract

Gastroesophageal reflux disease (GERD) is due to weakening of the lower esophageal sphincter tone and is thought to be one of the most common disorders of the gastrointestinal system (Harrison’s, 2008). The loss of tone in the lower esophageal sphincter (LES) allows gastric contents to flow backwards into the esophagus (Kahrilas, 2013), causing damage to the normal esophageal mucosa. Simple measures, such as lifestyle changes can be employed to try and live with the condition, but usually the treatment is medical with various drugs to make the pH of the gastric acid less acidic as to lessen the damage to the esophageal mucosa. In a few cases surgical treatment may be needed to fix an underlying anatomical anomaly. This is a common condition that affects many people on a daily basis and therefore proper knowledge of the pathophysiology, etiology, and treatment are of the utmost importance.

Etiology/ Pathophysiology

In a healthy person the normal barriers to prevent reflex include the lower esophageal sphincter, the diaphragm, and the relative location of the gastro esophageal junction below the diaphragmatic hiatus. The cause for the loss of sphincter tone may be due to idiopathic muscle weakness or may be due to secondary causes, which include, scleroderma, pregnancy, smoking, anticholinergic drugs, smooth muscle relaxants, and surgical damage to the lower esophageal sphincter (Harrison's, 2008). Besides the loss of LES tone, other causes of reflux include, increases in gastric volume; which can be seen in post-prandial states or gastric hyper secretion states. In addition to this, lying down or a hiatal hernia may lead to gastric contents being close to the gastro esophageal junction; finally the increase in gastric pressure seen in obese patients, pregnancy, and tight clothes; in fact obesity is a risk factor for GERD (Harrison's, 2008).

Epidemiology

There are limitations to assessing the prevalence to the disease as signs and symptoms of heartburn and/ or regurgitation are not seen in every patient, and the patient may in fact already have esophagitis or Barrett's esophagus. (Kahrilas, 2013). Regardless of this fact, some studies have proposed that in Western civilizations, the prevalence of the disorder is in the range of 10-20% of the population, while in Asia prevalence is <5% (Kahrilas, 2013). Population based studies have shown that approximately 15% of people report symptoms of heart burn or regurgitation at least once per week, while 7% have daily symptoms (Harrison's, 2008).

Signs/Symptoms

The most common symptoms reported by patients that suffer from GERD include, heartburn, regurgitation, and dysphagia. There are some symptoms that are considered as extra esophageal manifestations such as, chronic cough, laryngitis, and bronchospasm. Heartburn is described as a burning sensation that is felt right behind the sternum (retro-sternal) and occurs following a meal. Regurgitation is the reflux of gastric contents into the mouth or hypo-pharynx, and may have bits of undigested food mixed with the gastric juices. Dysphagia is typically seen with long standing GERD and is attributable to reflux esophagitis and the development of a stricture (Kahrilas, 2013). Other symptoms that are considered to be atypical include, chest pain, water brash, globus sensation, odynophagia, and nausea (Kahrilas, 2013). Chest pain in the setting of GERD may mimic angina pectoris and any patient coming in for chest pain should be evaluated with an EKG.

Diagnosis

While diagnostic tests are available, generally speaking diagnosis is made by history alone; included in the anamnestic data patients may be prescribed a one-week trial of a PPI, and if symptoms improve the diagnosis is secured. In patients that are refractory to treatment or present with complications of GERD additional evaluation is necessary. The approach to evaluation is based on three categories: 1. Documentation of mucosal injury; 2. Documentation of reflux; and 3. Definition of the pathophysiology. Mucosal injury is evaluated by doing a barium swallow, esophagoscopy, and mucosal biopsy. Documentation of reflux is done by doing a 24-hour recording of pH

in the esophagus; finally the determining the pathophysiology of GERD is important for management of symptoms, for example anti-reflux surgery (Harrison’s, 2008).

Nurses can aid in the recognition of the correct symptoms of “ heartburn”. Heartburn is a common complaint by patients and may signify different conditions, but may also be a term used incorrectly. For example, non-erosive reflux disease does not have the characteristic burning sensation that is seen in reflux esophagitis, but rather the patients tended to characterize the pain as a “ stomach ache” (Manabe, Haruma, Hata, Kamada, and Kusunoki, 2008).

Treatment

Treatment revolves around symptom relief and the prevention of complications from erosions of the esophagus. Mild cases can be managed by providing support for lifestyle changes. Nurses can help teach the patient about weight reduction and the removal of certain foods from the diet such as, fatty foods, coffee, chocolate, alcohol, mint, and certain juices. Besides diet, smoking cessation is important, as it is a major risk factor for the development of GERD (Harrison’s, 2008). Nurses can aid patients by giving them coping strategies and attainable goals for quitting smoking. Patients should also be aware of the side effects of drugs that may also cause loss of the lower esophageal tone. For example patients may be on calcium channel blockers for various cardio-vascular conditions and should be aware of the risk of GERD with the use of this drug; and nurses are in a great position to educate their patients on the use of various drugs. Besides lifestyle changes, patients greatly benefit from the use of proton pump inhibitors (Kahrilas,

2013). This drugs shut down the H+ pump in the stomach leading to less acidic acid being formed. Nurses can educate their patients on the use of these drugs, for example these drugs have a maximum benefit when they are taken 30 minutes before a meal (Harrison's, 2008). If the patient is refractory to medical treatment there is a surgical option; fundoplication is a procedure where the gastric fundus is wrapped around the esophagus and essentially creates a reflux barrier (Harrison's, 2008).

GERD is a common condition with many complications, proper recognition of symptoms with quick initiation of treatment can improve quality of life for the patient dramatically.

Works Cited

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