

# Case study: patient with heart burn



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The patient is a 45 year old male with a history of eight weeks complaint of heart burn that worsens with lying down after dinner. The patient states that the pain lasts thirty minutes to two hours, and that it wakes him at night. Patient reports taking Maalox and Roloids up to five times daily, however these only help for a short time.

#### Medical History

- No Known Allergies
- Hypertension for two years
- Rheumatoid arthritis in hands and feet for one year

#### Social History

Patient is married with three children. Patient drinks two beers daily for the past twenty years and smokes one pack per day for twenty years.

#### Current medications

Prednisone 20 mg orally daily

Diltiazem 240 mg orally daily

Piroxicam 30 mg orally daily

Multi- vitamin one orally daily

#### Physical examination

T. = 99 RR= 18 Pulse= 77 BP= 127/76

Weight 242 Height 59"

ENT- EOMI, PERRLA, mild sputum

Cardiac- normal S1 and S2

Chest- slight dyspnea

Abdomen- soft, with mild pain (4 on 1-10 scale, with 10 being worst) to upper quadrant below sternum.

Genitourinary- deferred

Rectal-deferred

Extremities- arthritic changes to hands

Skin- normal

Neuro- AAO times 3, normal DTR

Gastroesophageal reflux disease is a condition in which stomach content leaks backward from the stomach into the esophagus. The symptoms are heartburn, nausea, and regurgitation; this causes an inflammation of the esophagus and possibly the larynx. Complications can be esophageal ulcers, Barrett esophagitis, chronic cough, and can lead to infection and inflammation of the lungs. Diagnosis is typically made by symptoms, endoscopy, and esophageal acid tests (Brunton, Chabner, & Knollman, 2011).

GERD is caused by a break down in the barrier between the esophagus and the stomach. There are three main types of treatment that physicians consider when treating reflux disease. The treatment will depend on the

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severity of the symptoms (Brunton, Chabner, & Knollman, 2011). With any patient suffering from GERD, there are lifestyle changes and dietary changes that are effective in management of the disease (Brunton, Chabner, & Knollman, 2011). Lifestyle changes that the patient can do are as follows:

- Stop smoking if tobacco products are used (Brunton, Chabner, & Knollman, 2011)
- Taking antacids (of aluminum hydroxide content) (PubMed, 2012)
- Avoid food consumption within 2 hours of going to bed (PubMed, 2012)
- Avoid caffeinated beverages, chocolate, nicotine, alcohol, and peppermint (PubMed).
- Monitor intake of spicy and acidic foods (PubMed, 2012)
- Limit the amount of high fatty foods in the diet (Brunton, Chabner, & Knollman, 2011)
- Eat 5 to 6 small meals during the day, instead of 3 large meals (PubMed, 2012)
- Monitor weight, as obesity increases the symptoms of GERD (Brunton, Chabner, & Knollman, 2011)
- Elevate the head of the bed using a 6 to 8 inch block or a wedge under the mattress to enhance acid clearance when reclining (PubMed, 2012)
- Eat slowly and chew food thoroughly to enhance digestion (PubMed, 2012)

\*Avoid restrictive clothing, lifting heavy objects, straining, working in a bent position, and stooping (PubMed, 2012).

\* Chewing gum, this increases saliva production and natural acid reduction (PubMed, 2012).

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The symptoms may be controlled with the medications; however, the medical issue never goes away. Lifestyle changes are helpful in the overall treatment and control (Brunton, Chabner, & Knollman, 2011).

## Diagnosis

Diagnosis and treatment consist of a physical examination and history, esophageal motility testing, esophageal acid test, endoscopy (esophago-gastro-duodenoscopy or EGD), and possible biopsy to diagnosis Barrett's (Ananal, 2012). The esophageal acid test is considered the "gold standard" for diagnosis (PubMed).

## Current medications and interactions related to GERD

Calcium channel blockers are classifications of medications used to treat hypertension. These drugs can weaken the lower esophageal sphincter, which can cause GERD (Hughes, Lockart, & Joyce, 2007)

Corticosteroids in increased amounts have been associated with indigestion, heartburn, stomach pain and cramping, vomiting and diarrhea (Ananal, 2012).

NSAIDs such as Piroxicam may cause abdominal cramping or severe pain, severe continuous heart burn and nausea. In combination with corticosteroids there is a higher risk of abdominal pain and the risk of stomach bleeding (Brunton, Chabner, & Knollman, 2011).

## Treatment

Treatment can include elevation of the upper body when sleeping, diet changes, and avoid certain foods, eating smaller more frequent meals, and stop smoking and alcohol use (Brunton, Chabner, & Knollman, 2011). Medical treatment will include antacids taken one hour after meals; Tums and Rolaids are not recommended for regular use due to being a calcium carbonate. Histamine antagonist, such as Zantac, should be taken 30 minutes before bedtime to prevent nocturnal acid breakthrough. Proton pump inhibitors, such as Prilosec, should be taken, one hour before the morning meal. Foam barriers such as Gaviscon, work as a barrier to stomach acids and may be taken as needed for symptom relief, three times daily (Ananal, 2012).

Antacids and alginic acid (Gaviscon) are the drugs of choice for quick relief of symptoms. These agents act primarily by rapidly increasing the pH of the gastric refluxate. Alginic acid reacts with sodium bicarbonate in saliva to form sodium alginates. The sodium alginate floats on the top of the gastric contents where it acts as a mechanical barrier, minimizing exposure of the esophagus to refluxate. H<sub>2</sub> receptor blockers act by inhibiting histamine stimulation of the gastric parietal cells, thereby suppressing gastric acid secretion. They are most effective in suppressing nocturnal acid secretion. Proton pump inhibitors (PPI) strongly inhibit gastric acid secretion. They act by irreversibly inhibiting the H<sup>+</sup> - K<sup>+</sup> adenosine Triphosphatase pump of the parietal cell. By blocking the final common pathway of gastric acid suppression compared with H<sub>2</sub> receptor blockers. When prescribed appropriately to patients with severe symptoms or refractory disease, the PPIs are more cost effective because of their high healing and remission rate

and the consequent prevention of complications (Brunton, Chabner, & Knollman, 2011).

### Prescriptions

#1

DATE\_6/12/2014\_\_\_\_\_

Patient name\_\_\_\_\_ (M/F) AGE\_45\_\_\_\_\_

Address\_\_\_\_\_ Weight\_242\_\_\_\_\_

Prilosec 40 mg tablet # 30

Take one tablet by mouth every morning before the morning meal for acid reflux control

Refill\_1\_ signature\_\_\_\_\_

Generic sub \_\_Yes\_\_ DEA#\_\_\_\_\_

#2

DATE\_6/12/2014\_\_\_\_\_

Patient name\_\_\_\_\_ (M/F) AGE\_45\_\_\_\_\_

Address\_\_\_\_\_ Weight\_242\_\_\_\_\_

Zantac 75 mg tablet # 30

Take one tablet by mouth every night 1 hour before bedtime for acid reflux control

Refill\_\_1\_\_ signature\_\_\_\_\_

Generic sub \_\_Yes\_\_ DEA#\_\_\_\_\_

#3

DATE\_\_6/12/2014\_\_\_\_\_

Patient name\_\_\_\_\_ (M/F) AGE\_\_45\_\_\_\_\_

Address\_\_\_\_\_ Weight\_\_242\_\_\_\_\_

Gaviscon 1 chewable tablet as needed for heartburn relief # 1 bottle

Take one tablet by mouth three times daily as needed for relief of breakthrough heartburn

Refill\_\_1\_\_ signature\_\_\_\_\_

Generic sub \_\_Yes\_\_ DEA#\_\_\_\_\_

## References

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