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Gastro-Esophageal Reflux Disease: Mini Review with Respect to a Case

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Abstract

Gastro-Esophageal Reflux Disease (GERD) is an upper gastrointestinal tract disease that is characterized by various esophageal and extra-esophageal syndromes. Incidence and prevalence of GERD are increasing day by day due to poor dietary habits and lifestyles. Other pathological factors may include side effects associated with drugs, frequent transit LES relaxation, hypotensive LES, obesity, pregnancy and increased gastric volume and delayed emptying as well. PPIs are the most recommended method to treat GERD. Other may include H2 receptor blockers, antacid, surgery, long-term use of medications.

Keywords: GERD; Heart Burn; Esophageal and Extra-Esophageal Syndromes.

Introduction

GERD is a chronic disease of the upper gastrointestinal tract [1]. It is alarming to know the frequently increasing incidence rate of GERD worldwide. There are several factors contributing to GERD. It has been reported that prevalence rate of GERD was 5.2-8.5% in Eastern Asia, while In Iran it was 6.3-18.3%. Pakistan is facing a relatively higher number of the prevalence rate of GERD that is about 22.2% and 24.0% [2].

For the first time, GERD was defined in 2006 and known as the Montreal definition of GERD. According to which GERD is a condition that generates because of the reflux of the contents of the stomach that results in the inconvenient symptoms and complications [3]. GERD can be classified into two main types based upon its symptoms i.e. esophageal and extra-esophageal syndromes [4] Table 1.

Commonly GERD is referred to as heartburn leading towards the various complications. These may be esophageal or extra-esophageal symptoms including asthma, hoarseness, sleep disturbances. It is widely classified into three main categories i.e. Non-Erosive Reflux Disease (NERD) and erosive reflux disease (ERD). Both ERD and NERD are the non-complicated form of GERD. The third type is complicated reflux disease (CRD). Studies showed that 60% of the patients suffer NERD while about 35% of patient care at the risk of ERD. CRD is less common and only 5% patient face CRD [5].

There are various risk factors associated with the GERD. People with higher BMI has 2.5 times more tendency to develop GERD as compared to the people having normal or less BMI [6]. Hiatal hernia is also linked with the occurrence of GERD. Previously it was considered the only factor behind a hernia. Size ad presence of a hiatal hernia increases the risk of GERD by decreasing the pressure on LES [7].

Consumption of alcohol, cola, spicy food also leads towards the GERD. While GERD may also be caused by the use of various drugs like dopamine, nicotine, CCBs, theophylline estrogen, glucogan, progesterone. The pregnant woman often suffers from heartburn [8].

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Table 1: GERD classification based on symptoms.

Esophageal Syndrome	Extra-esophageal Syndrome
Symptomatic Syndrome • Typical Reflux syndrome • Reflux Chest Pain Syndrome	Established Association • Reflux Cough • Reflux Asthma • Reflux Laryngitis • Reflux Dental Erosion
Syndrome with esophageal Injury • Reflux Esophagitis • Reflux Stricture • Barrett' Esophagus • Adenocarcinoma	Proposed Association • Sinusitis • Pulmonary Fibrosis • Pharyngitis • Recurrent otitis media

Table 2: Medication therapy.

Sr. No	Brand name	Generic name	Frequency
1	Cap Risek 40mg	Omeperazole	Before meal QID
2	Syp. Mucain	Antacid	1 tablespoon TID
3	Chymoral	Tripsin and Chymotripsin	TID
4	Nospa 40mg	Drotaverine	TID when required
5	Cap Imodium	Lopramide	When required

There is no gold standard set to diagnose GERD. But empirical therapy, Monometric Study, Endoscopy, Barium swallow study, 24hr pH study are the diagnostic tests used to identify the GERD [9].

Lifestyle modification should be the first line treatment in a pregnant woman. Medication therapy mostly includes PPI, H2 receptor blockers, antacids, alginates. Chronic GERD that has relapsing nature can also treat through the surgery or long-term use of medication. Depending on the risk to benefit ratio treatment should be adopted [10].

Case Presentation

An 18-year-old girl facing constant gastric reflux from last 4 months, she felt difficulty in eating and swallowing. She had poor dietary habits with more consumption of meat and spicy food. Previously, she was instructed to change her dietary habits, but she didn't focus. She was facing nocturnal acidity and also had associated abdominal pain with the complaint of diarrhea. She had a sore throat most of the time. Doctors diagnosed her with GERD with the slow progression of peptic ulcer.

General examination

weight: 50kg, height: 5 feet 6 inches, bmi: 17.7, no physical activity

Family history

Patient's father had a history of gerd. Paternal uncle was also the patient of gerd that was worsened to ulcer.

Past medical history

No co-concurrent disease was found in the patient. In addition to this the past medical history reveals the absence of any disease in the patient Table 2.

Pharmasits Intervention

Three types of the interventions were made by the pharmacist after reviewing the patient history and physician prescription. These were drug-related interventions, lifestyle modifications, and dietary changes.

Drug-related interventions

Diagnostic Test should be done to know the progression of the disease.

Maintenance dose of omeprazole need to be adjusted. High dose of omeprazole is causing side effects in patients like frequent diarrhea and abdominal pain.

Chymoral should be taken before a meal.

Lozenges should be advised to avoid throat hoarseness.

ORS should be recommended to overcome the risk of dehydration associated with diarrhea.

Lifestyle modifications

Right sleeping posture.

Avoid late night meals.

Keep calm and don't take the stress.

Dietary Changes

Reduce meat consumptions.

Avoid spicy food.

Say no to junk food.

Take plenty of water and fresh juices.

Outcomes

The patient showed better compliance with the recommended interventions in the treatment prescribed after which she felt better and recovered soon. She used ORS that made her hydrated while the adjusted dose of omeprazole reduced the side effects and increased patient compliance with higher satisfaction. Moreover, lifestyle modifications and dietary changes helped her to not get GERD again.

Discussion

The patient discussed in this case report had a number of factors that lead to the GERD. The patient was at the stage where she may develop complications if not treated properly or left untreated. The patient was a student and remained stressed about the study. She was a spicy food lover, her family history also showed that she can develop GERD easily. Poor lifestyle and dietary habits were the main cause for her GERD. Moreover, the prescribed regimen did not fit for the patient. Omeprazole dose need to be adjusted. Studies showed that diarrhea and abdominal pain occurs in the patients taking a high dose of PPIs [11].

After the pharmacist's intervention about the doses and regimen, patient showed more compliance and improvement. While it was a difficult task to change patient's dietary changes. But after getting proper counseling from the pharmacist patient realized the importance and need to change the dietary habits. Hence, she followed the instructions.

Conclusion

GERD is a manageable and treatable disease, but if left untreated, may lead to various complications. It was

concluded that not only overall health status of the patient was improved, but the quality of life was also enhanced.

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