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Original Research

Assessment of cases of gastroesophageal reflux disease

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ABSTRACT:

Background: Gastroesophageal reflux disease (GERD) is a chronic condition in which stomach acid and sometimes stomach contents flow backward into the esophagus, causing irritation and inflammation.The present study was conducted to assess cases of gastroesophageal reflux disease. **Materials & Methods:** 72 cases of GERD of both genders were selected. Demographic parameters, lifestyle, and GERD for each subject was recorded. GERD was diagnosed by heartburn which was defined as a burning feeling in the epigastrium that rises through the chest in the substernal area and regurgitation which was defined if liquid coming back into the mouth leaving a bitter or sour taste. **Results:** Out of 72 patients, males were 42 and females were 30. The age (years)<40 years had 26 and >40 years had 46 patients. There were 22 males and 50 females. BMI (kg/m2) was normal in 12, obese in 22, and overweight in 38. Marital status was married in 49 and single in 23 patients. The difference was significant (P< 0.05). The risk factors were smoking seen in 52, excessive use of tea/coffee in 54, fast food in 40, fried food in 45, aspirin in 42, and NSAIDS in 38 patients. The difference was significant (P< 0.05). **Conclusion:** Older age, consumption of tea/coffee, smoking and NSAIDs had a significant association with GERD prevalence.

Keywords: Gastroesophageal reflux disease, smoking, NSAIDs

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INTRODUCTION

Gastroesophageal reflux disease (GERD) is a chronic condition in which stomach acid and sometimes stomach contents flow backward into the esophagus, causing irritation and inflammation.[1]The LES is a ring of muscle at the junction of the esophagus and stomach that acts as a valve to prevent stomach contents from refluxing into the esophagus. When the LES is weak or relaxes abnormally, it allows stomach acid to flow back into the esophagus.[2]Hiatal Hernia is a condition in which a portion of the stomach protrudes into the chest cavity through the diaphragm, which may weaken the LES and contribute to reflux.Certain foods and beverages, such as fatty or spicy foods, citrus fruits, tomatoes, chocolate, caffeine, and alcohol, can trigger or worsen reflux symptoms.[3]Excess weight can increase abdominal pressure, leading to reflux.Hormonal changes and increased abdominal pressure during pregnancy can contribute to GERD symptoms.Smoking can weaken the LES and impair the body's ability to clear acid from the esophagus.[4]

Several parameters have been found to be associated with the occurrence of GERD-related symptoms including weight, alcohol consumption,smoking, intake of non-steroidal anti-inflammatory drugs, and sleeping position (right side). Understanding the prevalence and the factors/parameters associated with the occurrence of GERD can assist in preventing the occurrence and treatment of GERD.[5]The present study was conducted to assess cases of gastroesophageal reflux disease.

MATERIALS & METHODS

The present study consisted of 72 cases of GERD of both genders. All gave their written consent to participate in the study.

Data such as name, age, gender, etc. was recorded. A questionnaire containing questions related to demographic parameters, lifestyle, and GERD for each subject was recorded. GERD was diagnosed by heartburn which was defined as a burning feeling in the epigastrium that rises through the chest in the substernal area and regurgitation which was defined if

liquid coming back into the mouth leaving a bitter or sour taste.The presence of GERD was confirmed if the subject reported heartburn and/or acid regurgitation in the preceding year with a frequency of at least one time per week,irrespective of its severity or duration.Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 72		
Gender	**Male**	**Female**
Number	42	30

Table I shows that out of 72 patients, males were 42 and females were 30.

Table II Assessment of parameters

Parameters	Variables	Number	P value
Age (years)	<40	26	0.01
	>40	46	
Gender	Male	22	0.01
	Female	50	
BMI (kg/m^2)	Normal	12	0.04
	Obese	22	
	Overweight	38	
Marital status	Married	49	0.01
	Single	23	

Table II, graph I show that age (years)<40 years had 26 and >40 years had 46 patients. There were 22 males and 50 females. BMI (kg/m2) was normal in 12, obese in 22, and overweight in 38. Marital status was married in 49 and single in 23 patients. The difference was significant (P< 0.05).

Graph I Assessment of parameters

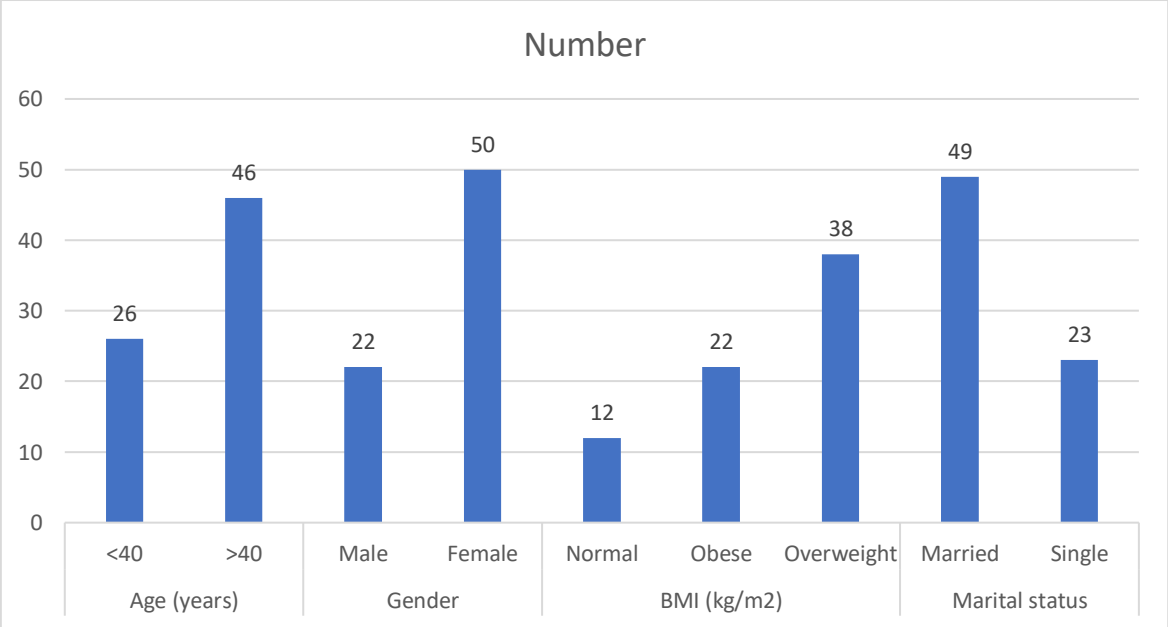

Table III Assessment of risk factors

Parameters	Variables	Number	P value
Smoking	Yes	52	0.01
	No	20	
Tea/coffee	Yes	54	0.01
	No	18	
Fast food	Yes	40	0.49
	No	32	
Fried	Yes	45	0.03
	No	27	

Aspirin	Yes	42	0.65
	No	30	
NSAIDS	Yes	38	0.81
	No	34	

Table III shows that risk factors were smoking seen in 52, excessive use of tea/coffee in 54, fast food in 40, fried food in 45, aspirin in 42, and NSAIDS in 38 patients. The difference was significant (P< 0.05).

DISCUSSION

According to estimates, GERD accounts for approximately US$ 9.3 billion of the annual direct costs associated with digestive diseases in the United States.[6] In addition, compared to the general population, GERD patients have reported declines in health-related quality of life. Heartburn and acid regurgitation are recognized as GERD-specific symptoms in patients from the West.[7]The prevalence of acid regurgitation, or an acid taste in the mouth, and heartburn, or a burning sensation below the breast bone, varies from 9% to 42% depending on the population under study.[8]Population-based studies have yielded inconsistent results regarding the association between GERD and lifestyle habits, such as alcohol and coffee consumption, cigarette smoking, aspirin and non-steroidal anti-inflammatory drug (NSAID) consumption, and diet.[9,10]The present study was conducted to assess cases of gastroesophageal reflux disease.

We found that out of 72 patients, males were 42 and females were 30.We found that age (years) <40 years had 26 and >40 years had 46 patients. There were 22 males and 50 females. BMI (kg/m2) was normal in 12, obese in 22, and overweight in 38. Marital status was married in 49 and single in 23 patients. Ho et al[11]estimated the prevalence of chronic gastrointestinal symptoms. The ethnic-adjusted prevalence of chronic abdominal pain, frequent dyspepsia, irritable bowel syndrome, chronic constipation, chronic diarrhea, and frequent reflux were 5.7% (95% confidence interval [CI], 3.3-8.1), 7.9% (95% CI, 5.0-10.8), 2.3% (95% CI, 0.8-3.9), 3.9% (95% CI, 1.9-5.9), 4.5% (95% CI, 2.3-6.7), and 1.6% (95% CI, 0.6-2.6), respectively. There were no ethnic differences in the prevalence of any of these symptom categories except for reflux-type symptoms, which were more common among Indians (7.5%; 95% CI, 4.4-11.7) than Chinese (0.8%; 95% CI, 0.1-3.0) or Malays (3.0%; 95% CI, 1.26.1).

We found that risk factors were smoking seen in 52, excessive use of tea/coffee in 54, fast food in 40, fried food in 45, aspirin in 42, and NSAIDS in 38 patients. Suresh et al[12] enrolled a total of 234 subjects with GERD. GERD prevalence was 33.76%. GERD was more common in females (34.50%) but the difference was insignificant (p=0.128). A higher prevalence was observed in those with age more than 40 years (p=0.032). Obesity (mainly central) was significantly associated with GERD prevalence (0.023).GERD was more prevalent in patients with a history of headaches taking NSAIDs (p< 0.001). Smokers had more GERD symptoms (P< 0.001). subjects with a history taking yogurt with water and mixed with salt with meals had fewer reflux symptoms (P=0.001, P=0.033, respectively). The history of drinking tea or coffee (P = 0.334) with meals was not associated with GERD symptoms. We also noticed more symptoms in subjects taking NSAIDs and aspirin,but the difference was significant only for NSAIDS (P< 0.001).

The limitation of the study is the small sample size.

CONCLUSION

Authors found that older age, consumption of tea/coffee, smoking and NSAIDs had a significant association with GERD prevalence.

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