

ORIGINAL RESEARCH

Assessment of prevalence and risk factors of gastroesophageal reflux disease

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Received: 20 February, 2023

Accepted: 27 March, 2023

ABSTRACT

Background: Heartburn and acid regurgitation (the typical symptoms of gastro-oesophageal reflux disease) are very frequent in Western countries. The present study was conducted to assess prevalence and risk factors of gastroesophageal reflux disease (GERD). **Materials & Methods:** 120 patients with complaint of heart burn of both genders were included. Lifestyle, and GERD for each subject was recorded. GERD was diagnosed by having 2 well defined GERD symptoms; heartburn which was defined as a burning feeling in epigastrium rises through the chest in substernal area and regurgitation which was defined if liquid coming back into the mouth leaving a bitter or sour taste. **Results:** Out of 120 patients, males were 70 and females were 50. GERD was present in 50 and absent in 60. 45 smokers had GERD, 40 NSAIDs/ Aspirin users had GERD, 35 non- fruit users had GERD and 38 beverages (Aerated) users had GERD. The difference was significant ($P < 0.05$). **Conclusion:** Most common risk factors for GERD was smoking, NSAIDs/ Aspirin, non- fruits users and beverages (Aerated) users.

Key words: GERD, smoking, NSAIDs

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INTRODUCTION

Heartburn and acid regurgitation (the typical symptoms of gastro-oesophageal reflux disease) are very frequent in Western countries, with a prevalence in the general population ranging from 26% to 60%. Although support for the participation of a genetic factor in gastro-oesophageal reflux disease has been found in a number of studies, no phenotypical feature associated with genetic factors has yet been identified.¹ Various hypotheses for such inconsistencies have been proposed. The results may depend on the population studied; indeed, there is a notable geographical variation in the prevalence of GORS. In addition, the frequency of occurrence and severity of symptoms are measured differently in different studies.^{2,3}

Symptoms associated with the occurrence of gastroesophageal reflux disease (GERD) characterized as one of the serious health problems globally.⁴ GERD is also getting more prevalent in Indian population. GERD is a chronic disease which occurs due to the interaction between refluxed gastric content with the esophageal mucosa.⁵ Most prominent symptoms are heartburn which significantly after the quality of life of the person. Previous studies have

shown environmental factors as the main culprit for the GERD.⁶ Several parameters have been found to be associated with the occurrence of GERD related symptoms including weight, alcohol consumption, smoking and intake of non-steroidal anti-inflammatory drugs and sleeping position (right side).^{7,8} The present study was conducted to assess prevalence and risk factors of gastroesophageal reflux disease (GERD).

MATERIALS & METHODS

The present consisted of 120 patients with complaint of heart burn of both genders. All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Lifestyle, and GERD for each subject was recorded. GERD was diagnosed by having 2 well defined GERD symptoms; heartburn which was defined as a burning feeling in epigastrium rises through the chest in substernal area and regurgitation which was defined if liquid coming back into the mouth leaving a bitter or sour taste. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I: Distribution of patients

Total- 120		
Gender	Male	Female
Number	70	50

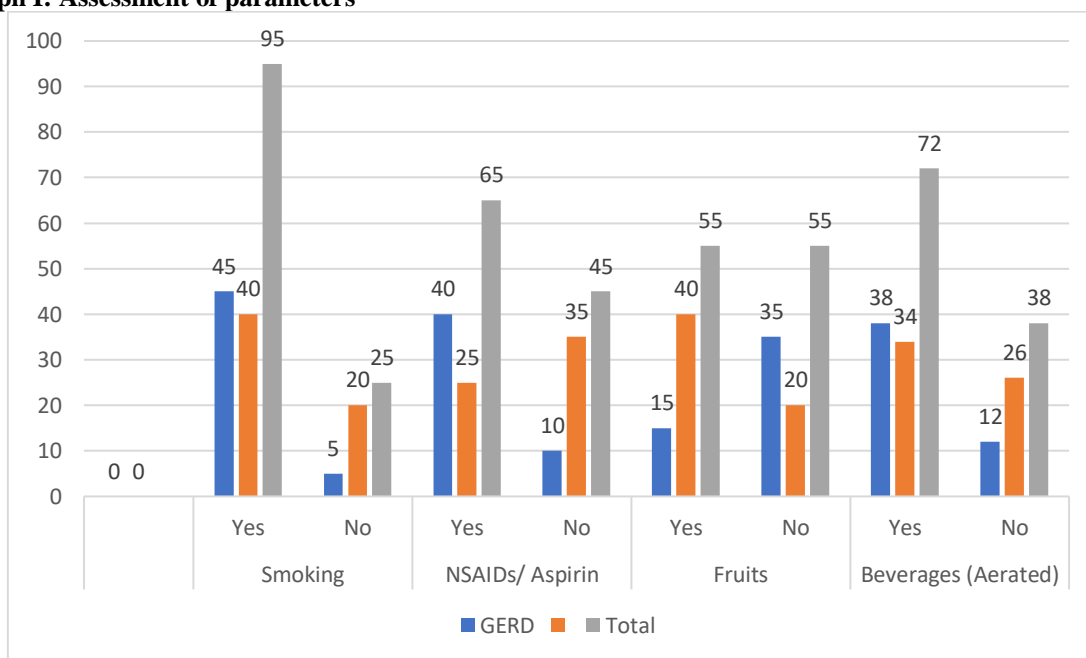
Table I shows that out of 120 patients, males were 70 and females were 50.

Table II: Assessment of parameters

Parameters	Variables	GERD		Total	P value
		GERD present	GERD absent		
Smoking	Yes	45	40	95	0.02
	No	5	20	25	
NSAIDs/ Aspirin	Yes	40	25	65	0.05
	No	10	35	45	
Fruits	Yes	15	40	55	0.03
	No	35	20	55	
Beverages (Aerated)	Yes	38	34	72	0.01
	No	12	26	38	

Table II, graph I shows that GERD was present in 50 and absent in 60. 45 smokers had GERD, 40 NSAIDs/ Aspirin users had GERD, 35 non- fruit users had GERD and 38 beverages (Aerated) users had GERD. The difference was significant ($P < 0.05$).

Graph I: Assessment of parameters



DISCUSSION

Understanding the prevalence and the factors/parameters associated with the occurrence of the GERD can assist in preventing the occurrence and treatment of GERD.^{9,10,11} The present study was conducted to assess prevalence and risk factors of gastroesophageal reflux disease (GERD). We found that out of 120 patients, males were 70 and females were 50. Rai et al¹² evaluated the prevalence of GERD and its association with the different risk factors. GERD prevalence in present study was 33.76%. GERD was more common in females (34.50%) but difference was insignificant ($p=0.128$). 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 headache taking NSAIDs ($p < 0.001$). Smokers had more GERD symptoms ($P < 0.001$). subjects with history taking yogurt with water and mixed with salt with meals had less reflux symptoms ($P=0.001$, $P=0.033$, respectively). 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 NSAID ($P < 0.001$).

We found that GERD was present in 50 and absent in 60. 45 smokers had GERD, 40 NSAIDs/ Aspirin users had GERD, 35 non- fruit users had GERD and 38 beverages (Aerated) users had GERD. Diaz-Rubio Met al¹³ measured the prevalence of gastro-oesophageal reflux symptoms and to identify associated factors in a representative sample of the Spanish population. The response rate was 71.2%. The annual prevalence of gastro-oesophageal reflux symptoms was 31.6% [95% confidence interval (CI), 29.8–33.4] and 2the weekly prevalence was 9.8% (95% CI, 8.6–10.9). Gastro-oesophageal reflux symptoms were associated with excess weight (OR, 1.53; 95% CI, 1.23–1.92), obesity (OR, 1.74; 95% CI, 1.30–2.32), the psychosomatic symptom score (OR, 2.98; 95% CI, 2.41–3.67) and the presence of gastro-oesophageal reflux symptoms in a direct family member (OR, 1.61; 95% CI, 1.17– 2.23). Gastro-oesophageal reflux symptoms of ‡ 10 years' duration were more frequent in obese subjects (OR, 1.92; 95% CI, 1.14–3.22) and those with a direct family member with gastro-oesophageal reflux symptoms (OR, 2.42; 95% CI, 1.44–4.06). Factors associated with gastro-oesophageal reflux symptoms of £ 1 year duration were a spouse with gastro-oesophageal reflux symptoms (OR, 2.33; 95% CI, 1.39–3.9) and the consumption of 1–5 aspirins/week (OR, 1.70; 95% CI, 1.01–2.86).

Saberi-Firooziet al¹⁴ determined the prevalence and symptoms of gastroesophageal reflux disease (GERD) in a healthy general population in relation to demographic, lifestyle and health-seeking behaviors in Shiraz, southern Iran. The prevalence of GERD was 15.4%, which was higher in females (17.3%), in rural areas (19.8%), and in illiterate subjects (21.5%) and those with a mean age of 50.25 years. The prevalence was significantly lower in subjects having fried food (14.8%), and fruit and vegetables (14.6%). More symptoms were noticed in subjects consuming pickles (22.1%), taking aspirin (21%) and in subjects with psychological distresses (27.2%) and headaches (22%). The correlation was statistically significant between GERD and halitosis (18.3%), dyspepsia (30.6%), anxiety (19.5%), nightmares (23.9%) and restlessness (18.5%). Their health seeking behavior showed that there was a significant restriction of diet (20%), consumption of herbal medicine (19%), using over-the-counter drugs (29.9%) and consulting with physicians (24.8%). Presence of GERD symptoms was also significantly related to a previous family history of the disease (22.3%).

The limitation the study is small sample size.

CONCLUSION

Authors found that most common risk factors for GERD was smoking, NSAIDs/ Aspirin, non fruit users and beverages (Aerated) users.

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