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Original Article

Assessment Of Risk Factors In Patients With Gastro- Esophageal Reflux Disease (GERD)- A Clinical Study

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ABSTRACT:

Background: Gastroesophageal reflux disease (GERD) is considered a common disease in the general population of Western countries. The present study was conducted to determine the risk factors of GERD in study population. **Materials & Methods:** The present study was conducted on 1025 subjects of both genders. A questionnaire was designed and all the subjects were advised to respond to it. It comprised of information pertaining to physical activities frequency, type of analgesics used, number of meals per day, most types of food, most types of drinks, smoking, family history of GERD. **Results:** Out of 1025 subjects, males were 524 and females were 483. The difference was non- significant (P- 0.5). Risk factors were tea use (45%), more than 3 meals a day (34%), use of spicy food (52%), fast food (38%), analgesic use (29%), salt use (42%) and intake of fibre free diet (31%). The difference was non- significant (P- 0.5). Subjects had 39% positive family history, 25% obese, 45% never do physical activity and 40% were smokers. The difference was significant (P- 0.01). **Conclusion:** GERD is a disease commonly encountered among adults. Risk factors found to be high use of tea, positive family history, use of fibre free diet, obesity and lack of exercise.

Key words: Fibre, GERD, Smoking

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INTRODUCTION

Gastroesophageal reflux disease (GERD) is considered a common disease in the general population of Western countries. GERD affects up to 44% of the US population at least once a month and roughly 20% once a week. There is also a large economic burden associated with GERD.¹ The chronic symptoms of gastro-esophageal reflux disease (GERD) are due to mucosal damage caused by stomach acid coming up from the stomach into the esophagus. GERD is usually caused by changes in the barrier between the stomach and the esophagus, including abnormal relaxation of the lower esophageal sphincter which normally holds the top of the stomach closed; impaired expulsion of gastric reflux from the esophagus or a hiatal hernia.² The GERD is associated with a number of risk factors such as analgesics intake (e.g. non-steroidal anti-inflammatory drugs (NSAIDs), types of food, types of drinks, smoking, family history, high body mass index (BMI), physical activities, salt or pickles consumption with meals and fast food. These risk factors are

mostly related to the lifestyle of the patient.³ Childhood GERD is a risk factor for GERD in adolescence and adulthood. The symptoms of GERD in children are chest pain, refusal to eat, dysphagia, frequent sore throat, respiratory problems such as wheezing, bronchitis and asthma, frequent cough, poor sleep and frequent waking, excessive salivation.⁴ The present study was conducted to determine the risk factors of GERD in study population.

MATERIALS & METHODS

The present study was conducted on 1025 subjects of both genders. All were informed regarding the study and written consent was obtained. Ethical clearance was taken from institutional ethical committee. General information such as name, age, gender etc. was recorded. A questionnaire was designed and all the subjects were advised to respond to it. It comprised of information pertaining to physical activities frequency, type of analgesics used, number of meals per day, most types of food,

most types of drinks, smoking, family history of GERD. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

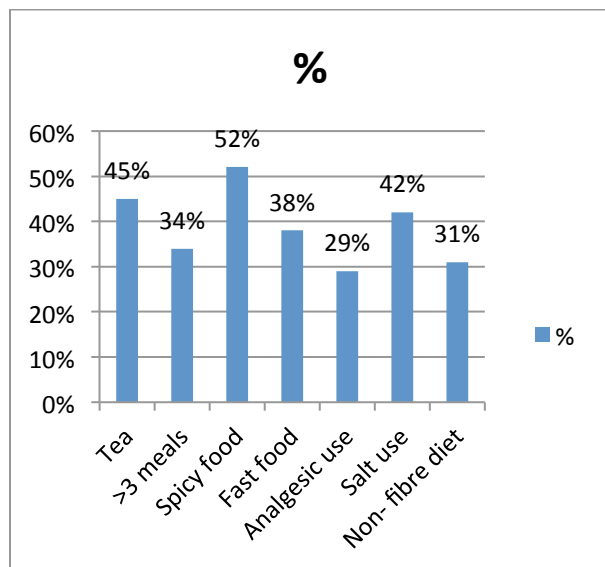
RESULTS

Table I shows that out of 1025 subjects, males were 524 and females were 483. The difference was non- significant (P- 0.5).

Table I Distribution of subjects

Total- 1025		
Males	Females	P value
524	483	0.5

Graph I Risk factors in subjects



Graph I shows that risk factors were tea use (45%), more than 3 meals a day (34%), use of spicy food (52%), fast food (38%), analgesic use (29%), salt use (42%) and intake of fibre free diet (31%). The difference was non- significant (P- 0.5).

Table II Characteristics in subjects

Characteristics	%	P value
Positive family history	39%	0.01
Obese	25%	
Refrain from physical activity	45%	
Smoking	40%	

Table II shows that subjects had 39% positive family history, 25% obese, 45% never do physical activity and 40% were smokers. The difference was significant (P- 0.01).

DISCUSSION

The prevalence of GERD in India is in fact much higher and similar to that reported in the western world. However, it is unclear if this represents a true increase in the prevalence of the disease or the reporting has increased due to heightened awareness of acid reflux. In recent years, the progress in the Indian society on both socio-economic and educational fronts has led to changes in diet and life-style choices. This advancement has also resulted in adaptation of Western diet and life-style such as consuming fried and sweet foods, processed and red meat, refined grains and high-fat dairy products, carbonated drinks, which in turn led to increase in prevalence of GERD.⁵ In present study, out of 1025 subjects, males were 524 and females were 483. We found that risk factors were tea use (45%), more than 3 meals a day (34%), use of spicy food (52%), fast food (38%), analgesic use (29%), salt use (42%) and intake of fibre free diet (31%). This is similar to Bhatia et al.⁶ David et al⁷ found that the overall estimated prevalence of reflux was 11.98%. For symptoms evaluated with GERD-Q, the estimated prevalences were heartburn 13.6%, regurgitation 16.9%, epigastralgia 16.67%, nausea 11.4%, difficulty sleeping due to heartburn or regurgitation 8.17% and consumption of medications additional to those formulated by the physician 6.68%. Women living in Barranquilla or Medellín, had statistically significant levels of comorbidities associated with reflux. Ali⁸ found that a total of 2,043 subjects participated in the study. The characteristics and behaviors of participants statistically significant with GERD were positive family history (39.3%), obese (body mass index > 30 kg/m²) (39.4%), not performing weekly regular physical activities ≥ 30 min (31.1%) and smoking (39.3%). GERD was commonly noticed in participants on analgesics (38.4%), not taking fibers (37.4%), drinking tea (33.4%), eating greasy (31.2%) and fast food (32.7%), and these were statistically significant with GERD (P ≤ 0.05). Chen et al⁹ observed that mean age of the responders was 42.69/16.4 years; response rate was 95%. The prevalence of heartburn and/or acid eructation occurring at least weekly was 6.2%. The age- and gender-adjusted point prevalence of GERD symptoms in South China was 2.3% according to the definition in this study. Divorced/widowed/separated subjects and subjects with a heavy burden of work were significantly more likely to report GERD symptoms. There was no difference in prevalence between male (2.6%) and female (2.4%) subjects and there was no significant association between age and prevalence of GERD symptoms. As compared with the general population, subjects with GERD symptoms experienced considerable impairment in quality of life. Richard¹⁰ found that overall, 1,524 (72%) of 2,118 eligible subjects responded. A body mass index >30 kg/m², reporting an immediate family member with heartburn or disease of the esophagus or stomach, a past history of smoking, consuming more than seven drinks per week, and a higher psychosomatic symptom checklist score were independently associated with frequent (at least weekly) reflux symptoms.

CONCLUSION

GERD is a disease commonly encountered among adults. Risk factors found to be high use of tea, positive family history, use of fibre free diet, obesity and lack of exercise.

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