Gastro-esophageal reflux disease in northwestern Tabriz, Iran

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Objective: To determine the prevalence of gastro-esophageal reflux disease (GERD), diagnosed based on the presence of frequent heartburn, in the general population in northwest area of Tabriz, Iran. Methods: In this cross-sectional study performed during May 2000. 4207 persons were chosen by systematic randomized sampling from a total population of approximately 230,000 persons. Heartburn occurring at least thrice in the recent two weeks was taken as evidence of GERD. Symptoms were correlated with the individual's diet. Results: The prevalence of GERD was 2.7%. In 80% of them, specific types of food aggravated heartburn. Waterbrash (42.8%) was the most common associated symptom. Conclusion: The prevalence of GERD in Tabriz is less than that reported from Western countries but is similar to that in other Asian countries. [Indian J Gastroenteral 2003;22:138-139]

Key words: Heartburn, prevalence

Gastro-esophageal reflux disease (GERD) is a common, chronic and expensive disease. It has a significant negative impact on quality of life, similar in degree to that of other chronic medical conditions. The usual symptoms of GERD are heartburn and acid regurgitation; other symptoms include waterbrash, dysphagia, globus sensation and odynophagia. Heartburn is a reasonably specific tool for identifying GERD in prevalence studies.

The prevalence of GERD appears to be rising in the West and in some developing countries, while Helicobacter pylori infection and peptic ulcer disease have been on the decline. GERD occurs more frequently in Europe and North America than in Asia but its prevalence is now increasing in many Asian countries, especially Japan.

Methods
This descriptive cross-sectional study was conducted during May 2000 in a region in northwestern Tabriz, Iran where approximately 70,000 families resided. Of these, 1017 families were selected using systematic randomization method. Subjects were interviewed by physicians using a checklist, and were examined. Those who had heartburn at least thrice during the recent two weeks were referred to a specialist clinic. Here the clinician filled up a reflux-specific form and put the subject on a follow-up program.

Results
Of the 4207 subjects (2080 men) interviewed, 115 (2.7%) had heartburn at least thrice in the recent two weeks; this included 36 of 2080 (1.7%) males and 79 of 2127 (3.7%) females. Of 115 patients, 6 (5.2%) were under 20 years of age (Table).

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Men GERD/Total</th>
<th>Women GERD/Total</th>
<th>Total GERD/Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>102/4</td>
<td>58/2</td>
<td>61/05</td>
</tr>
<tr>
<td>20-29</td>
<td>6/307</td>
<td>22/23</td>
<td>28/70</td>
</tr>
<tr>
<td>30-39</td>
<td>14/327</td>
<td>16/28</td>
<td>30/65</td>
</tr>
<tr>
<td>40-49</td>
<td>6/246</td>
<td>13/230</td>
<td>19/476</td>
</tr>
<tr>
<td>50-59</td>
<td>1/127</td>
<td>12/113</td>
<td>13/240</td>
</tr>
<tr>
<td>60-69</td>
<td>4/109</td>
<td>7/120</td>
<td>11/229</td>
</tr>
<tr>
<td>70 and above</td>
<td>4/60</td>
<td>4/61</td>
<td>8/141</td>
</tr>
<tr>
<td>Total</td>
<td>36/2060</td>
<td>79/2127</td>
<td>115/4207</td>
</tr>
</tbody>
</table>

The mean number of heartburn episodes during the recent 2 weeks was 4.5 in the affected men and 7.1 in the affected women. Of the 115 subjects, only 70 (34 men) reported to the specialty clinic. Of them, 56 (80%) of 28 men and 28 women reported that heartburn was exacerbated by specific types of food. These included liquid foods (e.g., soup, broth) by 34 (48.6%), fatty foods in 31 (44.3%), spiced foods in 23 (32.9%), sweet food in 11 (15.7%), and sour foods in 29 (41.4%). The other symptoms in the 70 subjects included waterbrash in 30 (42.8%), morning heartburn in 17 (24.3%), dysphagia in 11 (15.7%), asthma or wheezing in 4 (5.7%), and odynophagia in 4 (5.7%).

Discussion
The prevalence of heartburn in the study population was 2.7%. In Western countries, heartburn in the previous week has been reported to occur in 9% to 20% of the population. The prevalence is lower in Asian countries. The prevalence of heartburn in the previous month in Singapore, India, China and Malaysia is reported as 1.6%, 7.5%, 0.3% and 3%, respectively, whereas in Europe and North American countries it is up to 44%. Our rate is higher than that reported in China and Singapore.

Several factors have been implicated in the lower prevalence in Asian countries; these include low dietary fat intake, genetic factors, and low body mass index. Increased intake of carbonated drinks or of cer-
tain drugs may explain the increasing rates of GERD noted in some Asian countries.  
We found that heartburn was more common in women. It has been reported that mild forms of GERD occur more commonly in women whereas severe GERD is more common in men. Certain items of food have been identified as exacerbating reflux; 80% of our affected subjects could identify a relationship with one or more items of food.

The other symptoms reported by our subjects included waterbrash, morning hoarseness, dysphagia, and odynophagia; four subjects had associated wheezing or asthma. Each of these symptoms has been reported in previous studies as well.

In conclusion, the prevalence of GERD in Tabriz is lower than that reported in Western countries, but is similar to that in most Asian countries. Women in our population were more commonly affected, and most subjects could identify a correlation with specific types of food.

References

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Received March 11, 2003. Received in final revised form July 12, 2003. Accepted July 19, 2003