LETTERS TO THE EDITOR

PERSONALITY CHARACTERISTICS AND GASTROESOPHAGEAL REFLUX DISEASE IN SOUTHERN IRAN

Sir,
Studies on different populations showed that the prevalence of the primary gastroesophageal reflux disease (GERD) symptoms - heartburn (i.e., a burning feeling behind the breast bone) or acid regurgitation (i.e., an acid taste in the mouth) - varied between 9 and 42%. Previous studies showed that psychological factors may play a role in symptom perception among patients with gastroesophageal reflux disease, while 64% of people with heartburn reported exacerbation by stress.

This is the first study in Iran, which was performed in southern Iran, to determine the possible correlation between type A personality characteristics and symptoms of gastroesophageal reflux disease.

In a matched control cross-sectional study from April to July 2005 at the Gastroenterohpaeology Research Center affiliated to Shiraz University of Medical Sciences in Shiraz, 43 consecutive patients with symptoms of GERD according to a questionnaire (including heartburn, acid/food regurgitation, cough, dysphagia, epigastric or chest pain, epigastric fullness) and 43 age- and sex-matched controls entered our study by convenient random sampling method. The inclusion criteria were 'to be at least at middle school educational level' and 'not to have any symptoms of GERD.' A scaled and adapted version of Bortner and Rosenman questionnaire was used to evaluate type A personality, which was validated locally in the Department of Psychiatry of the university. Daily frequency of each symptom was recorded for each patient, especially chest pain, heartburn, difficulty in swallowing and acid regurgitation. The patients with GERD were compared with the control group regarding type A personality assessment and GERD symptoms scores. Student test compared the groups.

No significant difference was noted with respect to age and gender and place of residence between the case and control groups [Table 1]. Type A personality score was statistically significant between the two groups (PV = 0.008) [Table 2, Figure 1]. Type A personality score differed significantly between the two groups even after exclusion of the effects of education on this relation (PV = 0.019) [Table 3].

Our results showed that the characteristics

Table 1: Comparison of case and control groups in relation to age, gender and place of residence

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>Age (mean)</th>
<th>Sex Male / female (%)</th>
<th>Place of residence Urban / rural (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients</td>
<td>43</td>
<td>32.72 (5.42)</td>
<td>21/22</td>
<td>37/6</td>
</tr>
<tr>
<td>Control</td>
<td>43</td>
<td>32.76 (23)</td>
<td>20/23</td>
<td>41/2</td>
</tr>
<tr>
<td>PV</td>
<td>0.98</td>
<td>0.83</td>
<td>95.3/4.7</td>
<td></td>
</tr>
</tbody>
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The relaxation of the lower esophageal sphincter and increase of GERD. Therefore, type A personality may make the subjects more prone to GERD by increasing the level of stress in daily life. The last and the most plausible explanation is that persons with type A personality are more hypersensitive to physiological release of gastric acid due to low threshold of their capacity to bear pain or increased esophageal receptors’ perception of noxious stimuli. The basic cause of hyperalgesia would be excessive sensitivity of pain receptors themselves or facilitation of sensory transmission. Twenty-four-hour esophageal pH monitoring may be helpful in determination of the actual mechanism of increased incidence of reflux symptoms in persons with characteristics of type A personality. Therefore, if the theory of increased sensory transmission or hypersensitivity is true, there should be more patients with reflux symptoms, and monitoring of abnormal pH in this group will result into a higher type A personality score.

REFERENCES