Endoscopic and histologic findings in Iranian patients with heartburn

Yousef Bafandeh, Heidar Esmaili,* Saeed Aharizad
Departments of Gastroenterology and *Pathology, Tabriz University of Medical Sciences, Tabriz, Iran

Background: Heartburn is a common manifestation of gastroesophageal reflux disease. Barrett’s esophagus and esophageal adenocarcinoma, known complications of this disease, appear to be less prevalent in Asia than in Western countries. We looked for endoscopic and histologic evidence of Barrett’s esophagus in Iranian patients with heartburn. Methods: During September 2001 to September 2003, endoscopy was done in all patients with heartburn, either lasting longer than 3 months (n=1182) or for 1-3 months but resistant to 4 weeks of omeprazole therapy (n=66). Biopsy was taken from columnar-lined mucosa above the GE junction, at 5 cm above the Z line in normal-appearing mucosa, and from any abnormal areas. Results: Of the 1248 patients (mean age 45 [SD 15.5] years, 750 men; duration of heartburn 68 [SD 87.5] months), 960 (66.5%) had erosive esophagitis and 30 (2.4%) had Barrett’s esophagus, including 10 and 20 with long- and short-segment involvement, respectively. Of 134 patients with normal-appearing mucosa, 122 had histologic evidence of esophagitis. Conclusion: Barrett’s esophagus may be less common in Iran than in Western countries, despite presence of severe heartburn and erosive esophagitis. [Indian J Gastroenterol 2005;24:236-238]
Results

Endoscopic findings in the 1248 patients included in the study (mean age 44.1 [SD 15.5] years; 750 [60.1%] male) are shown in the Table. The mean duration of heartburn in these patients was 68.1 (SD 87.5) months. The severity of erosive esophagitis was as follows: grade A in 222 (15.4%), grade B in 440 (30.5%), grade C in 212 (14.7%), and grade D in 86 (6.0%) patients. Twenty patients with grade D erosive esophagitis had history of dysphagia and had luminal narrowing at endoscopy.

Of the 298 (20.6%) patients in whom esophageal mucosal biopsies were obtained (pinkish mucosa 104, distal esophageal nodularity 60, and normal mucosa 134), histological examination showed BE in 30 (2.4%) patients; 10 patients had LSBE and 20 had SSBE. Of the 10 patients with LSBE, four had grade D erosive esophagitis, four had esophageal stricture, and two did not have erosive esophagitis. Of 20 patients with SSBE, 16 had endoscopic evidence of esophagitis (grade A 10, grade B 6), and 4 did not have endoscopic esophagitis.

Histological findings in 134 patients with endoscopically normal esophageal mucosa were as follows: mild esophagitis in 54 (4.3%), moderate esophagitis in 60 (4.8%), severe esophagitis in 8 (0.64%), and no pathology in 12 (0.96%) cases.

On multivariate analysis, age, gender and duration of heartburn had no independent relationship with the presence or type of BE.

Discussion

Heartburn is the most commonly recognized manifestation of GERD.\(^1\) It has been suggested that history of heartburn alone is usually sufficient to confirm the diagnosis of GERD.\(^11\) In one study, the presence of heartburn had sensitivity of 78% and specificity of 60% for the presence of GERD, as defined by prolonged esophageal pH monitoring.\(^15\) In our study, 66.5% of patients with prolonged or severe heartburn had various grades of esophageal erosions at endoscopy and 122 patients (9.8%) with normal appearing mucosa had histologic esophagitis.

A major reason for investigating patients with chronic symptoms of GERD is to recognize BE,\(^3\) a major risk factor for adenocarcinoma.\(^16\) Some experts recommend at least one endoscopy to exclude BE during the lifetime of a patient with GERD. The specific criteria to select patients to screen for BE are not yet defined.\(^4\)

The epidemiology of BE is incompletely described.\(^4\) Although less than 1% of the general Western population has BE, 5%-15% of those with long-term reflux symptoms will have BE of some length by endoscopic screening:\(^1,13,17\) 3%-5% of such patients have LSBE and 10%-15% have SSBE.\(^8\) In a study from the US on 348 persons with heartburn of any duration, 5.7% had SSBE and 2.6% had LSBE.\(^18\) In the current study, 2.4% of our patients had BE, including 0.8% with LSBE and 1.6% with SSBE. Male gender, white race, long history of symptoms (>5 years), and age more than 50 years have been suggested as risk factors for BE in GERD patients.\(^4,8,11\) The overall prevalence of BE in our population was much lower than that in the Western population, despite prolonged or severe heartburn. It may be explained by a higher prevalence of \textit{H. pylori} infection in the population.

In conclusion, the prevalence of Barrett’s esophagus is low in our patients with prolonged or severe heartburn, despite a high prevalence of erosive esophagitis.

### Table: Endoscopic findings in 1248 patients with heartburn

<table>
<thead>
<tr>
<th>Lesions</th>
<th>Rate (%)</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosive esophagitis (EE)</td>
<td>960 (76.9)</td>
<td></td>
</tr>
<tr>
<td>Columnar-type epithelium</td>
<td>104 (8.3)</td>
<td>60 cases with EE</td>
</tr>
<tr>
<td>Erosive duodenitis</td>
<td>76 (6.1)</td>
<td>60 cases with EE</td>
</tr>
<tr>
<td>Duodenal ulcer</td>
<td>100 (8)</td>
<td>All with EE</td>
</tr>
<tr>
<td>Gastric ulcer</td>
<td>4 (0.32)</td>
<td></td>
</tr>
<tr>
<td>Distal esophageal nodularity</td>
<td>60 (4.8)</td>
<td></td>
</tr>
<tr>
<td>Esophageal diverticula</td>
<td>6 (0.5)</td>
<td></td>
</tr>
<tr>
<td>Normal endoscopy</td>
<td>134 (10.7)</td>
<td></td>
</tr>
</tbody>
</table>

References