Prevalence of symptoms of gastro-esophageal reflux amongst medical students

There are few prevalence figures of gastro-esophageal reflux (GER) from the Indian subcontinent. Available reports are as non-peer-reviewed Abstracts. A study from Jaipur\(^1\) reported a prevalence of 22\%, with urban prevalence of 26\% vs 18\% in the rural population. Another study, from Delhi,\(^2\) reported a prevalence figure of 162/1000 amongst hospital employees. The prevalence of GER amongst medical students was 10.3\% in one report from the West.\(^3\)

We determined the prevalence and characteristics of GER amongst medical students in our institute. Each of the questions in the questionnaire was
explained in detail prior to collection of data. Ethics committee approval and students’ consent was obtained prior to the study.

All 600 students in the college at the time of the study were contacted; 427 responded to the questionnaire. The boys (226) and girls (201) were similar in age, with median 20 years (range 17 to 23). 209 (48.9%) students had GER symptoms at some time and this was equally distributed between the two genders (48.6% vs 49.2%). Twenty-three students were smokers (1) or alcoholics (8) or both (14). Forty-nine students were chronic NSAIDs users – 31 amongst reflexers and 18 in non reflexers (OR 2.16).

Twenty of 122 first-year students (16.4%) had reflux symptoms; this increased to 91 of 144 (63.2%) among second-year students, 62 of 107 (66.3%) in the third year and 36 of 54 (66.7%) in the fourth year (comparison of rate in 1st year vs others was p<0.001). Heartburn in combination with regurgitation (87 students; 41.6%) was the most common presentation, followed by regurgitation alone (80; 38.2%) or heartburn alone (41; 19.6%); one person had dysphagia. Regurgitation was marginally more common in boys (43.6% vs 32.2%; p=0.09). While an increasing prevalence of heartburn was seen in successive years (p<0.001), a reverse trend was noted for regurgitation (p=ns; Table).

Table: Frequency of symptoms of gastro-esophageal reflux (n [\%]) in student groups

<table>
<thead>
<tr>
<th></th>
<th>Heartburn</th>
<th>Regurgitation</th>
<th>Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year</td>
<td>2 (10%)</td>
<td>14 (70%)</td>
<td>3 (15%)</td>
</tr>
<tr>
<td>Second year</td>
<td>13 (14%)</td>
<td>37 (40.5%)</td>
<td>41 (45.5%)</td>
</tr>
<tr>
<td>Third year</td>
<td>10 (16.1%)</td>
<td>2 (33.9%)</td>
<td>31 (50%)</td>
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<tr>
<td>Fourth year</td>
<td>16 (44.5%)</td>
<td>8 (22.2%)</td>
<td>12 (33.3%)</td>
</tr>
</tbody>
</table>

Only one student in the first year had dysphagia

Ten students (4.7%) had reflux symptoms on all days, 51 (24.4%) at least once a week, 92 (44.2%) at least once in a month, and 56 (26.7%) had reflux and ulcer-like symptoms during the university examination. One hundred of 209 (47.8%) were on self medication, especially prior to the university examination.

In conclusion, GER is not uncommon amongst medical students. Symptoms were least prevalent in the first year of the academic course.

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References


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Ampicillin-sulbactam versus amoxycillin in quadruple therapy for Helicobacter pylori eradication: a preliminary study

Antibiotic resistance is the main source of failure for Helicobacter pylori eradication, and beta-lactamases produced by resistant H. pylori strains are a possible mechanism underlying ineffectiveness of an amoxycillin-based triple or quadruple therapy.\(^1\) Of 153 clinical isolates of H. pylori in a previous study, 71.9% were resistant to amoxycillin, 77.8% to metronidazole, and 39.2% to both.\(^2\) Antibacterial activities of beta-lactamase inhibitors such as clavulanic acid and sulbactam have been demonstrated in a number of in vitro studies.\(^3,5\) However, using clavulanic acid along with amoxycillin has not significantly increased the H. pylori eradication rate in vivo.\(^5,6\)

We used a combination of sultamicillin (ampicillin 225 mg plus sulbactam 150 mg) instead of amoxycillin and compared its effectiveness with that of the standard amoxycillin-based quadruple therapy. The study protocol was approved by the ethical committee of Tehran University of Medical Sciences.

The study included 55 H. pylori-positive patients (age range 17-74 [median 38] years; 30 men) with peptic ulcer. H. pylori status was determined by rapid urease test at entry and C\(^14\)urea breath test 6 weeks after the end of therapy. After giving written informed consent, patients were randomly assigned to either of two groups: group 1 (n=29) received a 10-day standard quadruple therapy (amoxycillin 2 x 1000 mg/d, omeprazole 2 x 20 mg/d, colloidal bismuth subcitratate 2 x 240 mg/d, and metronidazole 2 x 500 mg/d), and group 2 (n=26) received sultamicillin (Pfizer SA, Case Postale, Zurich, Switzerland) 2 x 375 mg/d (before breakfast and dinner) instead of amoxycillin in the quadruple regimen for the same duration.

In group 1, one patient discontinued treatment due to severe allergic reactions. Vomiting, skin rash, and pruritus occurred in 3 other patients. All patients in group 2 completed the study. However,