**Helicobacter pylori eradication had no effect on heartburn or gastroesophageal reflux in *H. pylori* infection**


**Question**

In patients with *Helicobacter pylori* infection, what is the effect of its eradication on symptoms of heartburn and gastroesophageal reflux?

**Methods**

**Design:** Randomized placebo-controlled trial (Bristol Helicobacter project).

**Allocation:** [Concealed]†.*

**Blinding:** Blinded [clinicians, patients, data collectors, and outcome assessors]†.*

**Follow-up period:** 2 years.

**Setting:** 7 general practices in northeastern Bristol, England, UK.

**Patients:** 1558 patients who were 20 to 59 years of age (mean age 46 y, 51% women) with a 13C-urea breath test (UBT) showing *H. pylori* infection.

**Intervention:** Clarithromycin, 500 mg, and ranitidine bismuth citrate, 400 mg, twice daily for 2 weeks (*n* = 787) or placebo (*n* = 771).

**Outcomes:** Symptoms of heartburn and gastroesophageal reflux.

**Patient follow-up:** 92% (intention-to-treat analysis).

**Main results**

At 6 months, repeated UBT results were negative in 91% of patients in the eradication treatment group and 14% of those in the placebo group. The eradication-treatment group did not differ from the placebo group for rates of heartburn and gastroesophageal reflux (Table).

<table>
<thead>
<tr>
<th>Helicobacter pylori eradication treatment with clarithromycin and ranitidine bismuth citrate vs placebo at 2 years‡</th>
<th>Eradication treatment</th>
<th>Placebo</th>
<th>RRR (95% CI)</th>
<th>NNT</th>
<th>RRI (CI)</th>
<th>NHH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heartburn</td>
<td>23.9%</td>
<td>24.2%</td>
<td>1.4% (−19 to 18)</td>
<td>Not significant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gastroesophageal reflux</td>
<td>18.9%</td>
<td>17.6%</td>
<td>7% (−14 to 34)</td>
<td>Not significant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

†Information provided by author.

**Commentary**

The study by Harvey and colleagues found that *H. pylori* eradication did not result in new or worsening gastroesophageal reflux disease (GERD) symptoms. Several points of this study deserve consideration. First, although the terms “heartburn” and “acid reflux” are central to this study, they are not clearly defined in the report or in the reference cited by the authors (1). This is potentially problematic because terms used to describe the symptoms of GERD are fraught with ambiguity (2). Also notable was the high rate of “spontaneous” *H. pylori* clearance in the placebo group. As the authors suggest, this was probably due to lowering the cut-off for a positive UBT result, which probably improved sensitivity at the expense of specificity.

In the placebo group, 75 of 99 patients with “spontaneous” resolution had borderline positive UBT results, suggesting that these patients may not have ever been infected. One wonders about the corresponding number of patients with false-positive UBT results in the *H. pylori* eradication group.

Further, these results may or may not be relevant to other parts of the world. The finding of a slightly higher prevalence of heartburn in patients infected with *H. pylori* is consistent with the greater probability of antral gastritis and acid hypersecretion reported in western countries. In such patients, *H. pylori* eradication would not be expected to induce or exacerbate GERD. On the other hand, eradication of *H. pylori* in populations where associated pangastritis and its attendant acid hyposecretion predominate could lead to different clinical outcomes, particularly in persons with preexisting GERD or a predisposition to GERD (3).

These issues notwithstanding, this study provides further evidence that in western countries, concerns about the possibility of worsening GERD should not influence the decision to eradicate *H. pylori*.

**References**