To the Editors:

Prevalence of *Helicobacter pylori* infection determined by histology in patients with different upper gastrointestinal diseases

Helicobacter pylori infection is prevalent in developing countries. India, Pakistan and Bangladesh report around 80% prevalence both in patients with upper gastrointestinal diseases and asymptomatic individuals [1-2]. Among Sri Lankans, the reported *H.pylori* prevalence is inconsistent and shows a wide variation [3-5]. Many Sri Lankan studies have either used small number of patients or used limited number of diagnostic techniques and these may have partly contributed to the variation in the prevalence reported. This study examined the prevalence of *H. pylori* infection in a group of patients with upper gastrointestinal diseases at a tertiary care centre in southern Sri Lanka.

We selected 251 consecutive patients who underwent routine upper gastrointestinal endoscopy for clinical indications in Teaching Hospital, Karapitiya, Galle from January 2006 to June 2007. Patients who had taken specific *H. pylori* eradication therapy during the previous six months and patients who consumed antibiotics active against *H. pylori* during four weeks preceding the endoscopy were excluded. Informed written consent was obtained from all the patients. Approval for the study was granted by the Ethics Committee, Faculty of Medicine, Galle.

Minimum of five gastric biopsies; three antral and two corporal, were collected from each patient into 10% formalin. Haematoxylin and Eosin (H&E) and modified Giemsa staining techniques were used to detect *H. pylori* infection. Presence of *H. pylori* was confirmed by an experienced histopathologist when either H&E or modified Giemsa showed the characteristic morphological evidence of *H. pylori*.

The overall prevalence of *H. pylori* was 49.4% (124/251). Of the oesophageal diseases, oesophageal varices had *H. pylori* prevalence of 63.2% (12/19). *H. pylori* prevalence among patients with erosive oesophagitis and hiatus hernia was 53.3% (24/45) and 48.6% (18/37), respectively. Number of patients with oesophageal ulcers and growths were too small to obtain a true prevalence value.

Of 217 patients who had chronic gastritis histologically, 114 had *H. pylori* giving a prevalence of 52.5%. According to the distribution, patients with pan gastritis and antral gastritis had *H. pylori* prevalence of 53.3% (97/182) and 48.3% (14/29), respectively. Only six patients were detected to have corporal gastritis and half of them were positive for *H.pylori.* The prevalence of *H. pylori* in all endoscopically detected gastric ulcers was 51.8% (29/56).

The overall prevalence of *H. pylori* in this group of patients was 49.4%. Even though *H. pylori* is the key aetiological factor in chronic gastritis, only 52.5% of our patients with chronic gastritis had *H. pylori.* These figures are relatively low when compared with other Asian countries [1,2]. As we excluded patients who had consumed antibiotics, active against *H. pylori* in the recent past, the low prevalence we observed is unlikely to be a result of antibiotic use. *H. pylori* is associated with low socioeconomic status, overcrowding, unhygienic practices and poor sanitation. Sri Lanka has better health care indices compared to other south Asian countries and this may explain the low prevalence observed. Furthermore, some culinary and medicinal plants used in Sri Lankan cooking have bactericidal and anti-adhesive properties against *H. pylori* eg. turmeric, cumin, ginger and chilli [6].

We used histology to detect *H. pylori*. Modified Giemsa has equal sensitivity when compared with immunohistochemistry, the agreed gold standard for histology [7]. Yet, compared with PCR, histology has relatively low specificity and sensitivity [10] and this may have contributed to the low prevalence we observed. Most of the patients we encountered had a low density of *H. pylori*. The patchy distribution of the organism may have resulted in negative biopsies. Even though we obtained multiple biopsies, we may still have missed the detection of organisms.

Most of the upper gastrointestinal diseases we found did not exist as isolated diseases, they occurred in combination. When a patient was found to have several endoscopic abnormalities, the most clinically important condition, based on the reported morbidity and mortality associated, was selected to categorise the patient. Although this type of approach is questionable, only few patients were in this category. Furthermore technique such as PCR which has a higher sensitivity and specificity compared to histology may have given different results in our patients.

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