Dear Sir,

Helicobacter pylori is a spiral gram-negative bacterium responsible for chronic active gastritis of type B. It is also implicated in the pathogenesis of peptic ulcer disease and epidemiologically linked to gastric cancer [1-3]. The bacterium converts urea in the gastric juice into ammonia and carbon dioxide and creates its own protective alkaline microenvironment against the gastric acidity. One could wonder whether the high availability of urea in uremic patients is predisposing to more frequent gastric colonization with H. pylori.

We investigated the prevalence and the significance of H. pylori IgG-specific antibodies in 39 unselected uremic patients (22 men, 17 women, median age 58 years, age range 36-74) undergoing CAPD from 1 to 108 months. Serum samples were analyzed for H. pylori IgG-specific antibodies using ELISA (GAP test IgG, Bio-Rad) which has a 95% sensitivity [2]. A titer of $\geq 20$ U/ml was interpreted as positive. A questionnaire on gastric complaints (epigastric pain, nausea, vomiting, etc) was individually filled. Fifteen patients (38%), most of them females, suffered symptoms.

All patients were taking aluminum hydroxide and/or calcium carbonate as phosphate binders, and 4 of them were also taking ranitidine. Groups were formed based on gender, age, the actual existence of symptoms and of diabetes mellitus. The Student’s t test and $\chi^2$ analysis with Yate’s correction were used for statistical analysis.

A positive H. pylori IgG test was found in 25 patients (64%) with a titer ranging from 22 to 100 U/ml. The prevalence was higher in patients aged 56-75 years than in those 36-55 years (77 vs. 33%, $\chi^2 = 4.96, p < 0.05$). Nonsignificant higher prevalence was found in diabetics (88 vs. 58% in nondiabetics) as well as in females (82 vs. 50%) and in patients who suffered from dyspeptic symptoms (73 vs. 58%). No differences were found in mean titers of antibodies between diabetic and nondiabetic patients ($53 \pm 31$ vs. $45 \pm 21$ U/ml, $p = 0.2$) as well as between patients with and without symptoms ($55 \pm 25$ vs. $41 \pm 22$ U/ml, $p = 0.09$).

Invasive and noninvasive diagnostic methods for H. pylori infection are used [1-3]. Serologic test using IgG-specific antibodies is widely used as an epidemiologic tool and for monitoring...
treatment effectiveness. This does not differentiate active from past infection while the titer falls with eradication.

Uremic patients would be expected to be more susceptible in gastric colonization with H. pylori because of high availability of urea in gastric juice, low gastric motility and frequent hypochlorhydria [4], but this is not proved.

The prevalence of H. pylori IgG-specific antibodies in our CAPD patients was 64% which is similar to that reported (60%) in age-matched Greek general population [5]. In hemodialysis patients with a similar mean age the prevalence of H. pylori antibodies ranges from 34 to 44% [6-8]. In 18 CAPD patients, 7 patients (39%) of mean age 57 years were seropositive [4]. These prevalences were similar to those in age-matched healthy controls. From our study a higher prevalence of H. pylori antibodies in Greek CAPD population was observed. This could be attributed to the different ethnic and socioeconomic status of the studied population. The prevalence of H. pylori infection is high in developing countries while predisposing factors, that have been mentioned to affect it, are lower socioeconomic class, crowding, etc. [1,2].

The prevalence of H. pylori infection in the general population is increasing with age [1,2, 5]. This age-related increase of H. pylori prevalence was reported in hemodialyzed patients too [6-8]. We also found a higher prevalence in CAPD patients aged 56-75 years than in younger patients. The prevalence in our patients had a tendency to be increased in females as well as in diabetics and in patients who suffered from dyspeptic symptoms, but most of the diabetic patients and of the patients with gastric symptoms were female in gender and tended to be older than average. H. pylori infection is not necessarily associated with symptoms [2]. Therefore, the absence of any significant relation between seropositivity and dyspeptic complaints in our CAPD patients has to be expected.

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Our results suggest that H. pylori infection is no more frequent in CAPD patients than in the general population. It is possible that the frequent use of antibiotics in CAPD patients (e.g. for peritonitis) protects from an H. pylori infection or results even in eradication and consequently underestimates the prevalence. Among CAPD patients, the prevalence of H. pylori antibodies is higher in older patients and it seems to be higher in diabetics and in females. The significance of these observations has to be further evaluated in a greater number of patients.

References


H. pylori in CAPD Patients
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359