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Letters to the Editor

Chronic abdominal pain in Primary Care and the presence of *Helicobacter pylori* and parasites in stool

Key words: Chronic abdominal pain. Stool. *Helicobacter pylori*. Parasites.

Dear Editor,

A large number of Primary Care consultations are for chronic abdominal pain and heavy digestion, which can be related to infection with *Helicobacter pylori* and/or parasites in some patients (1,2). These are given an empiric therapy and/or their stool is examined for the presence of *H. pylori* and its treatment when detected (3). The prevalence of these parasites varies according to the socio-demographic setting, and they require specific detection and treatment (4). This study retrospectively analyses the prevalence of *H. pylori* and intestinal parasites in

stool samples from Primary Care patients presenting with chronic abdominal pain.

Between September 2010 and August 2013, 4,080 consecutive stool samples were studied; investigating the presence of *H. pylori* in 1240 samples from 1,240 patients and the presence of intestinal parasites in 2,840 stool samples from the same patients (who provided up to three samples each). Immunochromatography was used to detect antigens of *H. pylori* (5). Intestinal parasites were studied in concentrated stool specimens by observation under a microscope after staining with Lugol's solution (6). Infection with *Blastocystis hominis* was defined by the presence of more than five forms per field. The presence of antigens of *Cryptosporidium* and *Giardia* was studied in 607 samples with a soft consistency or derived from immunodepressed patients, using immunochromatography (7) and visualization of the stool concentrate with acid alcohol-resistant staining. The chi-square test was used for statistical analysis of the results.

Table I lists the results obtained. *H. pylori* was detected in 226 samples (22.3 %). Parasites were detected in 115 samples (4.05 %), comprising: *Giardia lamblia* (54.8 %), *B. hominis* (18.2 %), *Cryptosporidium* spp. (11.3 %), *Ascaris lumbricoides* (6.9 %), *Enterobius vermicularis* (4.3 %), *Strongyloides stercoralis* (1.7 %), *Trichuris trichura*, *Hymenolepis nana*, or *uncinaria* (0.9 %). Co-infection was observed in two samples: *A. lumbricoides* with *T. trichura* in one and *Cryptosporidium* spp. with *G. lamblia* in the other. Out of these samples with para-

Table I. Prevalence of infection with *H. pylori* and intestinal parasites in stool

Microorganisms (samples)	No. samples			
	Males		Females	
	≥ 18 yrs (%)	< 18 yrs (%)	≥ 18 yrs (%)	< 18 yrs (%)
<i>H. pylori</i> -positive (226)	46 (20.3)	38 (16.8)	96 (42.6)	46 (20.3)
<i>H. pylori</i> -negative (1,014)	139 (13.7)	231 (22.8)	328 (32.3)	316 (31.1)
Parasite-positive (115)	30 (26.1)	26 (22.6)	33 (28.7)	26 (22.6)
Parasite-negative (2,725)	685 (25.1)	543 (19.9)	913 (33.5)	584 (21.4)

sites, 25 corresponded to immigrants from Sub-Saharan Africa (*H. nana*, *G. lamblia*, *Cryptosporidium* spp., *S. stercoralis*, *E. vermicularis* and *B. hominis*) and 1 (uncinaria) to a female immigrant from Bolivia. Out of the 63 samples positive for *Giardia*, the antigen and visualization results did not coincide in 16 cases (15 by antigen detection alone and 1 by visualization alone). The antigen of *Cryptosporidium* was detected in only five samples. No cross-reactivity was observed between antigens of *Cryptosporidium/Giardia* and those of other parasites. The presence of *H. pylori* was more frequent in adults ($p < 0.001$), among both the males ($p = 0.02$) and the females ($p = 0.005$). No age or gender differences in parasitisation were observed.

An association with *H. pylori* infection has been reported in up to 60 % of patients with chronic abdominal pain (8), a higher proportion than the 22.3 % in the present series. The prevalence of infection may be attributable to resistance to the treatment applied in each setting (9). There was a lower prevalence of parasites, in the intermediate range of reports (10). Mucosal inflammation produced by *H. pylori* infection or parasitisation can produce a sensitization of afferent nerves and the onset of visceral hyperalgesia. In conclusion, the presence of *H. pylori* and intestinal parasitosis, especially the former, account for a substantial proportion of primary care consultations for chronic abdominal pain in our setting.

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