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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 stercolaris* (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**

| | *No. samples* | | | |
|---|---|---|---|---|
| | *Males* | | *Females* | |
| *Microorganisms (samples)* | *≥ 18 yrs (%)* | *< 18 yrs (%)* | *≥ 18 yrs (%)* | *< 18 yrs (%)* |
| *H. pylori*-positive (226) | 46 (20.3) | 38 (16.8) | 96 (42.6) | 46 (20.3) |
| *H. pylori*-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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## References

1. Barbara G, Cremon C, Pallotti F, De Giorgio R, Stanghellini V, Corinaldesi R. Postinfectious irritable bowel syndrome. J Pediatr Gastroenterol Nutr 2009;48(Supl. 2):S95-7.
2. Wee EW. Evidence-based approach to dyspepsia: from Helicobacter pylori to functional disease. Postgrad Med 2013;125:169-80.
3. Shimoyama T. Stool antigen tests for the management of Helicobacter pylori infection. World J Gastroenterol 2013;19:188-91.
4. Bouchaud O. Circumstances for diagnosis and treatment of intestinal parasitosis in France. Presse Med 2013;42:84-92.
5. Blanco S, Forné M, Lacoma A, Prat C, Cuesta MA, Latorre I et al. Comparison of stool antigen immunoassay methods for detecting Helicobacter pylori infection before and after erradication treatment. Diagn Microbiol Infect Dis 2008;61:150-5.
6. Tenorio-Abreu A, Gil-Tomás J, Martínez-Macías O. Comparison between 2 parasite concentration techniques (Copropack versus Mini Parasep Solvent Free). Enferm Infecc Microbiol Clin 2013;31:347-8.
7. Gutiérrez-Fernandez J, Almagro-Nievas D, Heras-Caña V, Navarro-Marí JM. Bioaccumulation of Giardia and Cryptosporidium coproantigen in a child's human environment. An Pediatr (Barc) 2014 Apr 9. pii: S1695-4033(14)00155-6. doi: 10. 1016/j.anpedi.2014.007.
8. Baena-Diez JM, García-Lareo M, Martí-Fernández J, León-Marín I, Muñiz-Llama D, Teruel Gila J, et al. Prevalence of Helicobacter pylori infection in primary care: Sero-epidemiological study. Aten Primaria 2002;29:553-7.
9. Agudo S, Pérez-Pérez G, Alarcón T, López-Brea M. Rapid detection of clarithromycin resistant Helicobacter pylori strains in Spanish patients by polymerase chain reaction-restriction fragment length polymorphism. Rev Esp Quimioter 2011;24:32-6.
10. González-Moreno O, Domingo L, Teixidor J, Gracenea M. Prevalence and associated factors of intestinal parasitisation: A cross-sectional study among outpatients with gastrointestinal symptoms in Catalonia, Spain. Parasitol Res 2011;108:87-93.