

EPIDEMIOLOGICAL CORRELATIONS BETWEEN THE HELICOBACTER PYLORI INFECTION AND THE GIARDIA LAMBLIA INFECTION



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ABSTRACT

The **purpose** of the study performed by the authors was to identify an epidemiological correlation between the *Helicobacter pylori* infection and the *Giardia Lamblia* infestation.

Material and method: The group of individuals included in the study comprised 214 children, admitted to the Pediatrics Clinic II, between 2001- 2009. The diagnosis of infection with *Helicobacter pylori* and the *Giardia Lamblia* infestation, suspected after clinical examination (recurrent abdominal pains) was confirmed in the blood tests.

The **results** of this study indicate that the concurrent infestation with *Giardia Lamblia* was identified at 152 patients. Most of the subjects diagnosed with both diseases come from the rural areas, and the gender distribution is approximately equal.

Conclusions: The association between the *Helicobacter pylori* infection and the *Giardia* infestation is frequently encountered in pediatric practice and it represents an important etiological factor for the pain syndrome with children.

Key words: *Helicobacter Pylori*, lamblia, abdominal pain.

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INTRODUCTION

The *Helicobacter pylori* infection seems to be the most frequent infection in the world. In the developing countries, the infection is mostly acquired during childhood ¹; precarious hygiene standards, lack of sanitation, low economic status and living in crowded places are associated with an increase in the cases of infection and infection at an early age ².

Within a country's population, the infection rate varies among various individuals, according to the different social and economic conditions during their childhood. The better the living conditions of the population, the lesser cases of *Helicobacter pylori* are identified.

Also, it was noted that the role of the social and economic status is very important – the number of cases increases as the economic status of the children's families lowers. At the same time, a correlation with the low education level and precarious hygiene conditions was identified. Nowadays, the widely accepted source of infection is

the infected person (showing symptoms or as asymptomatic carrier) ³. Although the transmission of the disease is still to be investigated, the bacteria were isolated in saliva, dental plaque, and this proves the fact that the illness is transmitted primarily by oral or oral-fecal route ^{2,4}.

We should discuss the role of the water sources where the *Helicobacter pylori* DNA was identified, as well as the cats as potential sources of infection ⁵. The bacteria can survive in rivers for at least 7 days, while in its cocoid forms it can survive up to one year.

In general, the abdominal pains, especially the chronic and recurrent ones, are some of the most frequent causes of medical investigations. Yet, in most cases, their cause is difficult to identify ^{4,5}.

By the motility disorders it causes, the *giardia lamblia* infection is known as a determining factor in the dyspeptic syndrome and the abdominal pain syndrome by gastroesophageal reflux.

MATERIAL AND METHOD

The individuals included in the study were selected based on their clinical situation, represented by the recurrent and/or chronic abdominal pain syndrome, associated or not with dyspeptic symptoms or other signs of the disease.

Thus, the group of individuals included in the study comprised 214 children aged between 2 and 18 years old, admitted to the Pediatrics Clinic no. 2, between January 2001 and January 2009. The subjects were divided into three age groups:

- subjects under three years old;

- subjects aged between 3 and 12 years old at the time they were entered into hospital records;
- subjects over twelve years old;

The information recorded was the age when the disease was diagnosed, the gender, the social origin of the individuals and the laboratory investigations in order to establish the diagnosis. The demographics, as well as the clinical and paraclinical data have been gathered from the parents, the children themselves and from the medical observation chart. The confirmation of the

diagnosis was made by the quantitative dosage of anti-Helicobacter pylori IgG antibodies (ELISSA method) and the

coproparasitologic tests, in order to give evidence of the concurrent infection with Giardia.

RESULTS

For most of the children included in the study, who were found to be infected with Helicobacter pylori, the concurrent infestation with Giardia lamblia was identified. As we can see from fig. 1, the concurrent infestation with Giardia Lamblia was identified at 152 pa-

tients (71% of the 214 cases included in the study).

Most of the subjects diagnosed both with lambliasis and Helycobacter pylori infection comes from the rural areas (66%) – fig. 2, and the gender distribution is approximately equal.

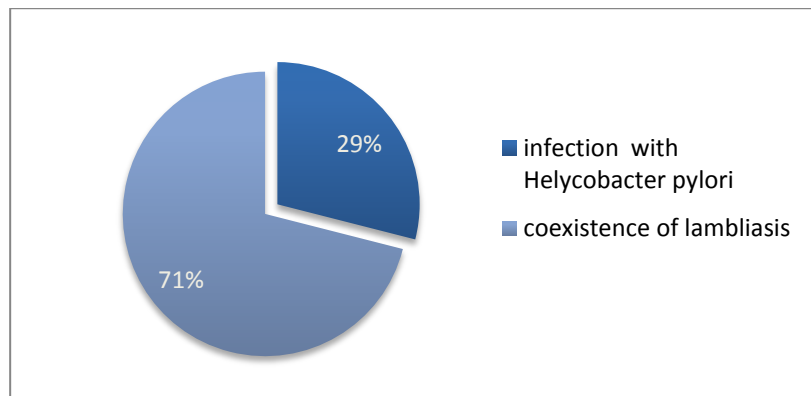


Fig.1 The concurrent infestation with Giardia Lamblia

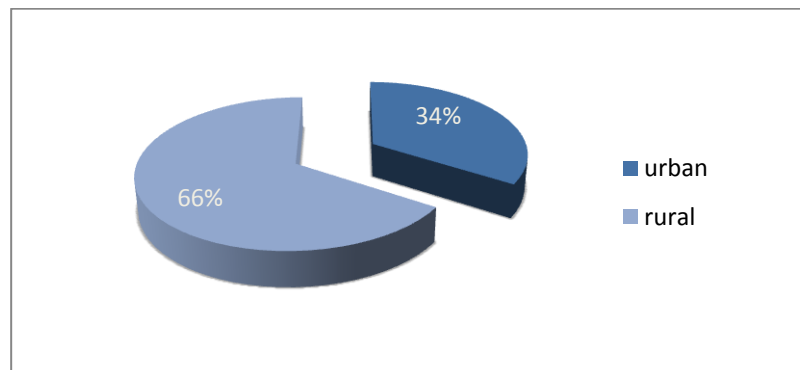


Fig.2 The provenience medium of patients with lambliasis and Helycobacter pylori infection.

As far as the age groups distribution is concerned, most of the diagnosed subjects are in the 3-12 years old group (59%) – as illustrated in fig. 3. As it was impossible to establish a time span from the moment of both the infection

with Helycobacter pylori and the parasitic infestation, we could not establish with certainty the determining role of one or the other to the apparition of the gastroesophageal reflux.

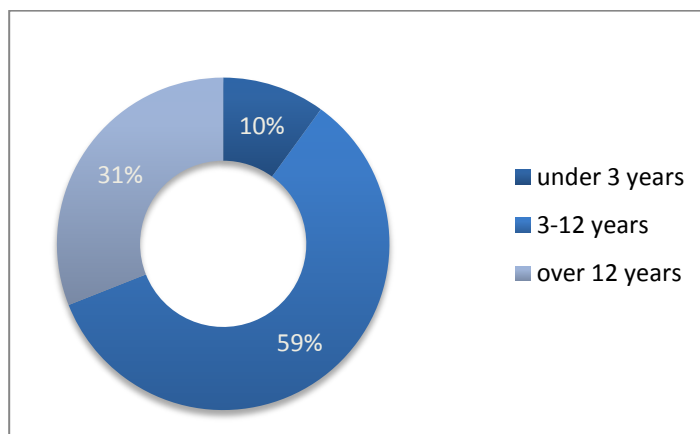


Fig.3 The age groups distribution.

CONCLUSIONS

The concurrent existence of the *Helicobacter pylori* infection and *Giardia Lamblia* infestation has been frequently ascertained during our study (71% of the 214 cases included in the study) and it represents an important etiological

factor for the pain syndrome with children.

Most of the subjects included in the study were aged between 3 and 12, and the treatment of both conditions has lead to the disappearance of symptoms.

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