



THE PREVALENCE OF HELICOBACTER PYLORI AMONG PATIENTS COMPLAINING OF ABDOMINAL PAIN IN PRINCE HASHIM BIN AL-HUSSEIN MILITARY HOSPITAL

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ABSTRACT

Introduction Helicobacter pylori (H. pylori) is classified as a gram negative, spiral shaped organism that colonizes the human gastric mucosa. . H. pylori has a worldwide distribution. It colonizes the acid secreting portion of the stomach where it remains for long period, possibly for life. Infections are asymptomatic in approximately 80% of individuals, however in the remaining 20% H. pylori infection is associated with a number of gastrointestinal disorders including gastritis, peptic ulcer disease, gastric adenocarcinoma and gastric mucosa-associated lymphoid tissue (MALT) lymphoma.

Objectives:1- To determine the prevalence of H.pylori among patients complaining from abdominal pain in Prince Hashem Bin Al-Hussein Military Hospital. 2- To investigate the relationship between the IgA and IgG with sex and age.

Patients and method:A retrospective study was conducted and included 101patients with abdominal pain visiting internal medicine clinics in Prince Hashem Bin Al-Hussein Military Hospital over a period of eight months from 1/12/2011 to 31/7/2012.The analysis was performed using Enzyme linked immunosorbent assay at the laboratory of Prince Hashem Bin Al-Hussein Military Hospital.

Results:Total of 101 patients was available for analysis. The results showed that the prevalence of IgG against Helicobacter pylori infection is 85%, while about 38.6% of cases were positive for IgA.

Conclusion:Our study showed high prevalence of Helicobacter pylori infection among patients complaining of abdominal pain. Helicobacter pylori infection is not associated significantly with age and sex.

Key words: abdominal pain, Helicobacter pylori.

INTRODUCTION:

Helicobacter pylori (H. pylori) is classified as a gram negative, spiral shaped organism that colonizes the human gastric mucosa. . H. pylori has a worldwide distribution(1). It colonizes the acid secreting portion of the stomach where it remains for long period, possibly for life(2,3).It is suggested that persisting H.pylori infection in spite of a strong cellular and humoral immunity both locally and systemically is due to the fact that natural infection does not produce protective immunity. Infections are asymptomatic in approximately 80% of individuals, however in the remaining 20% H. pylori infection is associated with a number of gastrointestinal disorders including gastritis, peptic ulcer disease, gastric adenocarcinoma and gastric mucosa-associated lymphoid tissue (MALT) lymphoma(4,5,6,7).

Researchers have conducted several epidemiologic studies in various regions and found the early acquirement of this infection in life especially in developing countries(8,9,10), infection with H. pylori occurs via oral ingestion of the bacterium and is transmitted primarily within families during early childhood(11,12).

Other routes of infection include direct transmission from person to person by saliva, vomit, or feces in industrialized countries(11,13).

There are certain therapeutic options for treatment of H. pylori infection including a combination therapy with two different antibiotics together with a proton-pump inhibitor, which is in most cases successful in eradicating the bacteria and healing ulcers(14).

One can test noninvasively for H. pylori infection with a blood antibody test, stool antigen test, or with the carbon urea breath test, the most reliable method for detecting H. pylori infection is a biopsy check during endoscopy with a rapid urease test, histological examination, and microbial culture.

There is also a urine ELISA test with a 96% sensitivity and 79% specificity. None of the test methods are completely failsafe. Even biopsy is dependent on the location of the biopsy. Blood antibody tests, for example, range from 76% to 84% sensitivity. Some drugs can affect H. pylori urease activity and give false negatives with the urea-based tests(15,16).

Material&Methods:

A retrospective study was conducted and included 101patients with abdominal pain visiting internal medicine clinics in Prince Hashem Bin Al-Hussein Military Hospital over a period of eight months from 1/12/2011 to 31/7/2012.The analysis was performed using Enzyme linked immunosorbent assay at the laboratory of Prince Hashem Bin Al-Hussein Military Hospital.

Results:**Characteristics of participants**

The study included 101 participants. About 56% of participants were under the age of 35 years whereas about 44% of participants were more than 35 years. About 65% of participants were males while about 35% of participants were females. About 38% of cases were positive for IgA and about 85% of cases were positive for IgG.

Variable	Frequency	Percentage
Age (years)		
<35	57	56.4
≥ 35	44	43.6
Sex		
Male	66	65.3
female	35	34.7
IgA		
Positive	39	38.6
Negative	62	61.4
IgG		
Positive	86	85.1
Negative	15	14.9

Table 1: General characteristics of participants

The relationship between IgA and study variables

The data presented in table 2 showed the relationship between IgA and both of age and sex. There were 22 cases (38.6%) positive for IgA under the age 35 years while there were 35 cases (61.4%) negative for IgA under 35 years. The data showed there were 17 cases (38.6%) positive for IgA over 35 years while there were 27 cases (61.4%) negative for IgA over 35 years. The relationship between IgA and age is not statistically significant.

The data showed that 40.9% of males were positive for IgA while 59.1% of males were negative for IgA , 34.3% of females were positive for IgA while 65.7% of females were negative for IgA. The relationship between IgA and sex is not statistically significant

variable	IgA		P value
	Positive	Negative	
	N (%)	N (%)	
Age (years)			0.99
<35	22 (38.6)	35 (61.4)	
≥35	17 (38.6)	27 (61.4)	
Sex			0.515
Males	27 (40.9)	39 (59.1)	
Females	12 (34.3)	23 (65.7)	

Table 2: the relationship between IgA and study variables

The relationship between IgG and study variables

As shown in table 3, 86% of participants under the age 35 years were positive for IgG, and 14% were negative for IgG under the same group. About 84.1% of participants were positive for IgG over 35 years and about 15.9% were negative under the same age group. The relationship between IgG and age is not statistically significant

In regard to sex, about 84.8% of males and about 85.7% of females were positive for IgG. The relationship between sex and IgG is not statistically significant (p value 0.907).

The relationship between IgG and study variables

variable	IgG		P value
	Positive	Negative	
	N (%)	N (%)	
Age (years)			0.793
<35	49 (86)	8(14)	
≥35	37 (84.1)	7 (15.9)	
Sex			0.907
Males	56 (84.8)	10 (15.2)	
Females	30 (85.7)	5 (14.3)	

The data of the present study showed that our results are in line with other studies in which it has been repeatedly shown that the titers of IgA and IgG antibodies to H. pylori in serum can be used as non-invasive tests for the presence of gastric H.pylori infection and gastritis.

It is not amazing to have no significant correlation between the titers of both IgG and IgA with age and sex The reason is thought to be attributed to the clinical outcomes of the patients which are independent of age and sex.

CONCLUSIONS: the study showed high prevalence of H.pylori infection among patients complaining of abdominal pain. H.pylori infection is not associated significantly with age and sex.

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