

The Comparison of Serum Anti- *Helicobacter pylori* IgG and IgA Levels in Patients with Gastrointestinal Symptoms

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Background & Objectives: *Helicobacter pylori* (*H. pylori*) is a human pathogen that can be colonized in the stomach. Today, *H. pylori* is the cause of chronic gastritis, gastric and duodenal ulcers and also can be a major risk in some malignancies (lymphoma and gastric cancer). Most medical laboratories only use anti-*H. pylori* IgG assays and not anti-*H. pylori* IgA in serum to diagnose early phase of infection. Therefore, the aim of this study is the comparison of serum levels of IgG and IgA antibodies in *H. pylori*-infected patients.

Methods: In our study enrolled 517 patients referred to Shahid Beheshti Hospital, Qom, Iran and suspected to infection with *H. pylori* (31% Male and 69% female). 10ml blood samples were taken from each patient and then the presence of IgG and IgA antibodies (anti-*H. pylori*) in the sera of patients were evaluated by ELISA (Enzyme-Linked Immunoabsorbent Assays) methods.

Results: Among individuals, the rate of positive cases of infection on the basis of IgG and IgA titers was 353 (68%) and 138 (27%) cases, respectively. Also, 7% of *H. pylori*-infected patients (37 cases) with IgG negative were IgA positive. In addition, 19% of patients were positive for both antibodies (IgG and IgA) and the average serum IgG levels were higher than IgA levels.

Conclusion: Our study shows that the prevalence of infection in Qom city is relatively lower than other cities. Also, the comparison of antibody responses to *H. pylori* in our patients indicate that although the sensitivity of IgA ELISA is lower than IgG ELISA, both antibody titers must be evaluated for the diagnosis of infection because in some cases, patients with IgG negative may have IgA positive assays. Therefore, in the diagnostic process of disease, IgG ELISA (association with IgA results) will be completed.

Keywords: *Helicobacter pylori*; IgG; IgA