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Original Article

Antibody Response to *Helicobacter pylori* among Patients with Suspected Gastric Disease

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Abstract

***Helicobacter pylori* infection is one of the most common infections worldwide. The prevalence of *H. pylori* infection varies widely by geographic area, age, race and socioeconomic status. The aim of this study was to determine the prevalence of anti-*H. pylori* IgG antibodies by ELISA method in common population in Bangladesh with respect to gender and age distribution. A total of 474 clinical samples were analyzed, of them 57.6% were positive and 42.4% were negative for anti-*H. pylori* IgG antibodies to *H. pylori*. There was significant association between *H. pylori* with gender and age. The seroprevalence was lower in females (53.5%) than in males (61.8%). Also, the anti-*H. pylori* positivity was higher in young age group (<15 years) both in males and females, and it was decreased with increasing age. The difference was statistically significant ($p > 0.05$).**

Keywords: *Helicobacter pylori*, seroprevalence, anti-*H. pylori* IgG

Introduction

Helicobacter pylori has been shown to play an important role in the development of gastritis and gastric ulcer. It is estimated that over 50% of the world population is infected with *H. pylori*[1]. *H. pylori* is a microaerophilic Gram-negative spiral-shaped bacterium which is causally related to chronic active gastritis, peptic ulcer disease[2], primary low-grade B-cell gastric lymphoma[3], and gastric carcinoma[4-5]. *H. pylori* infection is a common infection and is prevalent in both developing and developed countries. In contrast with industrialized nations, *H. pylori* infections occur early in life and with a higher frequency in the developing world. Also, while the prevalence of the infection has been dropped significantly in many parts of North America, Western Europe and Asia (especially Korea), no such decline has been noted in the developing world[6-7].

Epidemiological studies have revealed an association of *H. pylori* seroprevalence with increasing age[8], lower socioeconomic status[8-9] and crowdedness in the household[10] but not gastro-oesophageal reflux[11] or sex[12]. The prevalence of *H. pylori* shows large geographical variations. In various developing countries, more than 80% of the population is *H. pylori* positive, even at young ages[13]. The prevalence of *H. pylori* in industrialized countries generally remains under 40% and is considerably lower in children and adolescents than in adults and elderly people[14]. Within geographical areas, the prevalence of *H. pylori* inversely correlates with socioeconomic status, in particular in relation to living conditions during childhood[15]. In Western countries, the prevalence of this bacterium is often considerably higher among first- and second-generation immigrants from the developing world[16-17]. While the prevalence of *H. pylori* infection in developing countries remains relatively constant, it is rapidly declining in the industrialized world[18]. However, in industrialized countries the prevalence of *H. pylori* infection is low early in childhood and slowly rises with increasing age. This increase results only to a small extent from *H. pylori* acquisition at later age. The aim of the study was to evaluate the seroprevalence of *H. pylori* infection in Bangladeshi population.

Materials and Methods

Study population: The study population included patients with suspected gastric disease who were referred by practitioners, clinics and hospital throughout Dhaka City to Medinova Medical