

Evaluation of Anti-*Helicobacter pylori* IgG in Sera of Pregnant Women

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Abstract

Helicobacter pylori is a bacterial infection of the stomach, which plays a major role in abdominal symptoms and gastroduodenal pathology. The pregnant women had a significantly higher relative risk of acquiring *H.pylori* infection during pregnancy as a result of physiological alterations. To investigate the relationship of *H.pylori* with dyspeptic symptoms in early and late pregnancy, thirty sera samples were obtained from pregnant women and thirty sera samples were obtained from apparently healthy women as control. All studied groups were evaluated anti-*Helicobacter pylori* IgG antibody by ELISA. Ten of pregnant women samples (33.3%) were seropositive of anti-*H. pylori* IgG antibody in pregnant women compared with control. This lead to suggest that *H. pylori* positive may be related to nausea and vomiting in pregnant women.

Keywords: *Helicobacter pylori*, *Helicobacter pylori* IgG, Immunoglobulin G, ELISA.

Introduction

Helicobacter pylori is one of the most common bacteria infecting human in the world and it infects children in the developing countries early in life [1]. The prevalence of *H. pylori* is closed tied to socioeconomic condition and accordingly, this infection is more common in developing countries than in other countries such as united state [2]. There was a relationship between *H. pylori* infection and anemia in pregnant women, therefore, the tests for *H. pylori* infection be included in preconception consultations, especially for women who have a history anemia or persistent anemia [3]. *H. pylori* infection during pregnancy sent to be interfering with trace elements metabolism and can promote significantly to increase morbidity. Prior to confirmation of these findings in a well-controlled woman to be screened for *H. pylori* infection to reduce *H. pylori* associated during pregnancy [4]. Pregnancy has been associated with changes in both humoral and cellular immunity, these changes included alternative in the various classes of antibodies during differential gestational periods. These alternations may expose pregnant women to an increase risk of infection with microorganisms [5]. Infection with cag A, positive *H. pylori* strain is linked to an increase in women potential to abort early possible through increase released of inflammatory cytokines [6].

Materials and Methods

All samples were collected and measured in a private laboratory in Al-Karrada Al-Sharqia city. The study included thirty pregnant women with age 22 -35 years and thirty non-pregnant women as control. All studied groups were measured anti- *H. pylori* IgG antibodies by ELISA test from Euroimmune (Germany) [7].

Results and Discussion

The result of anti- *H. pylori* IgG antibody showed that there were significant differences ($P \leq 0.05$) between studied groups.

In comparison with control, 10 of thirty pregnant women samples (33.3%) (Fig. (1)) had seropositive of *H. pylori* IgG antibody.

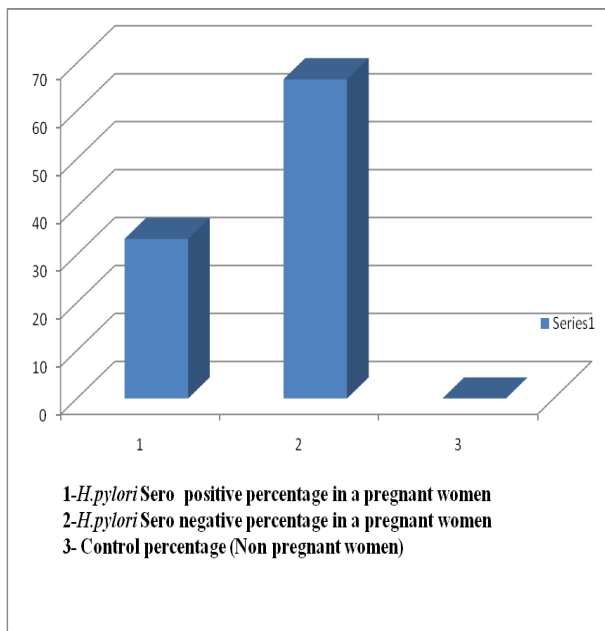


Fig. (1) *H. pylori* in studied groups.

H. pylori sero prevalence in French pregnant women decreased from 18.7% to 11.2% which is agreement with decrease *H. pylori* in other western European countries [8].

In another study showed that *H. pylori* is not associated with an increase in dyspepsia or with maternal or non-maternal morbidity [9]. *H. pylori* seropositive varies with geographic origin. The Percentage incidence of Infection with *H. pylori* in Finland reaches 10% [10], 15.5% in Belgium [11] and 44.8% in Turkey [12]. *H. pylori* is associated with nausea and vomiting [13]. Pregnancy is a physiological condition associated with both anatomical and biochemical alternation. All geared towards the sustenance of the growing fetus [14]. Hyperlipidemia which is a common feature of both pregnancy and *H. pylori* infection is a known risk factor for coronary heart disease [15]. Others showed that pregnant women with *H. pylori* may have increased disorder in lipid metabolism than non-infected pregnant women [16].

Conclusions

This study is compatible with other studies which reviewed that *H. pylori* infection in pregnant women could be plays an important role in causing functional dyspepsia. It commonly causes symptoms such as nausea, vomiting, abdominal pain, and bloating [17], [18], [19].

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الخلاصة

تعد بكتريا *H.pylori* احد انواع اصابات المعدة والتي تلعب دورا رئيسيا في اعراض البطن والامراض المعدية. تكتسب النساء الحوامل خطر الاصابة بهذه البكتريا كنتيجة الى التغيرات الفسيولوجية الحاصلة لديهم. لأجل التحري في مدى علاقة *H.pylori* مع اعراض عسر الهضم لدى النساء الحوامل في المراحل المبكرة والمتأخرة من الحمل، جمعت ٣٠ عينة مصل دم من نساء حوامل و ٣٠ عينة مصل دم من نساء غير حوامل سليمات ظاهرياً كمجموعة سيطرة، خضعت مجاميع الدراسة الى تقييم أضداد بكتيريا *H. pylori* من النوع IgG باستخدام إختبار ELISA حيث أظهرت الدراسة أن ١٠ عينات من النساء الحوامل (٣٣,٣%) كانت مصولهن أيجابية لبكتيريا *H. pylori*. يمكن الأستنتاج من وجود أضداد بكتيريا *H. pylori* من النوع IgG في مصول النساء الحوامل ان له علاقة بأصابتهم بالغثيان والقيء.