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Helicobacter pylori and CagA Infection of Pregnancy Women and Hyperemesis Gravidarum

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This letter highlights that *Helicobacter pylori* infection may be effective on excessing hyperemesis gravidarum (HG) in pregnant women. Ordinary, there are different methods to *H. pylori* detection in the scientific laboratory, but many of false reports result in critical conditions like ulcer and carcinoma. Gastric complications including vomiting and nausea are a sever forms of pregnancy-associated sickness among 45% to 95% of women (1). HG is the main cause of gastric malformation and mucosa associated-lymphoma with weight losing, metabolic disturbance and nutritional problems (2-5). There are also factors involving HG, like steroids hormones (estradiol and progesterone) and immunological disorders (6).

Helicobacter pylori is the major factor of gastro-duodenal diseases with high mortality rate (7). *H. pylori* infection had a strong correlation with highly risk of HG (2). Although there were studies on relationship between HG and *H. pylori* infection, some researchers did not quite belief on it. Then, it needs more works concerning HG and *H. pylori* infection and other relating factors.

At our previous study, the results obtained from *H. pylori* serum antibody test showed that 36 cases of HG and 34 of control were positive to *H. pylori* infection (81.8%, 77.2% respectively). Infected with CagA (cytotoxin-associated gene A) through experimental and control was 45.4% and 27.2% respectively (6). Pregnant women positive to HG were in 6-14 weeks of gestation. The average of Ig G titers shows no remarkably different between two groups. The levels of Ig G are ranged between 15 to 20 Au/mL for 2-4 weeks.

At serological method, to determine HG, 3 markers including vomiting, weight loss (more than 3 kg) and presence of positive ketonuria were considered (8). In addition, some causes such as hyperthyroidism, multiple gestation, psychological and gastrointestinal disorders could be defined for vomiting (9).

It is suggested that testing methods to evaluate of *H. pylori* infection should be done by serological and non-serological. One of the non-serological testing is Hp PCR DNA which seems much more efficient for *H. pylori* detection. HpSA test is another way to obtain correlation between *H. pylori* and HG.

Based on previous studies, HG could be impressed by different inducers. Socio-economic status is the most factor for presenting *H. pylori* infection. It appears that *H. pylori* might be one of the inducer of HG. We found not significantly different among groups similar to some studies (10, 11), although ones implied that HG patients have a greater rate of *H. pylori* infection. On the other hand, *CagA* gene could be increased pathogenicity of *H. pylori* strains (6).

Nausea and vomiting may be affected by multiple factors such as infection by *H. pylori*. Therefore this study suggests that genetically, histologically and ELIZA testes should be done for confirming relation between *H. pylori* and HG.

Conflict of Interests

Authors declare that they have no conflict of interests.

Ethical Issues

Not applicable.

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