Role of Helico-Bacter Pylori In The Pathogenesis of Hyperemesis Gravidarum

Thesis

Submitted for partial fulfillment of the master degree in
Obstetrics and Gynecology

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Mai Essam El-din Mohammed

Contents

List of Abbreviations

ACTH	:	Adrenocorticotropic hormone
FBC	:	Full Blood count
FDA	:	Food and drugs administration
GERD	:	Gastro-esophageal reflux disease
HCG	:	Human chorionic gonadotrophin
HCG	:	Serum Human Chorinic Gonadotrophin
HISQ	:	Hyperemesis Impact of Symptoms Questionnaire
LFT	:	Liver function tests
MALT	:	Mucosa associated lymphoid tissue
NSAIDs	:	Non steroidal anti-inflammatory drugs
NVP	:	Nausea and vomiting during pregnancy
PICC	:	Parenteral nutrition via central venous access
PUQE	:	Pregnancy-Unique Quantification of Emesis and Nausea
TFT	:	Thyroid function tests
THHG	:	Transient hyperthyroidism of hyperemesis gravidarum
TPN	:	Total parenteral nutrition
U&E	:	Urea and electrolytes
US	:	Ultrasound

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Protocol of thesis
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Introduction

About 50% - 90% of all pregnancies are accompanied by nausea and vomiting (**Jueckstock et al., 2010**). According to a study of more than 360 pregnant women, only 2% experienced only nausea in the morning whereas, in 80%, complaints persisted throughout the day. The condition is usually self-limiting and peaks at around 9 week gestation. At 20 weeks symptoms typically cease. However, in up to 20% of cases, nausea and vomiting may continue until delivery (**Jueckstock et al., 2010**).

This condition is known as nausea and vomiting during pregnancy (NVP) or emesis gravidarum and is of no pathological significance as long as the affected women do not feel unwell or restricted in their daily life (**Mylonas et al., 2007**). There are, however, different grades in the scope of NVP, which range from occasional morning-sickness to excessive vomiting that persists throughout the day. The most severe grade of NVP often leads to hyperemesis gravidarum.

A small percentage of pregnant women experience a severe form of nausea and vomiting that is termed hyperemesis gravidarum (synonym: excessive vomiting during pregnancy). This disorder has an estimated incidence of 0.5% - 2% of all

live births (**ACOG, 2004**). A standard definition of HG is vomiting sufficiently severe to produce weight loss, dehydration, acidosis from starvation, alkalosis from loss of HCL in vomitus and hypokalemia (**Chihara et al., 2010**).

Hyperemesis Gravidarum is associated with maternal and perinatal morbidity often requiring hospitalization and medical treatment to avoid life threatening complications **(Ismail, 2007)**.

Little is known about the etiology of hyperemesis gravidarum, but a variety of mechanisms related endocrine, and immunologic factors, gastrointestinal conditions and metabolic enzymes have been proposed as possible underlying causes **(Verberg, 2005)**.

H. pylori has been recognized to play a role in diseases of the gastrointestinal tract. It has been hypothesized that H. pylori may increase the risk of hyperemesis gravidarum **(Irene Sanddven et al., 2009)**.

H. pylori is one of the common bacterial infections world wide.It is a gram negative, flagellated bacterium, which can cause the development of chronic gastritis, duodenal and gastric ulceration, and some types of gastric cancers. Overcrowded conditions associated with poverty lead to

increase transmission and higher prevalence rates **(Delaney, 2002)**.

H.pylori is thought to spread between persons through the feco-oral or oral-oral route. Contaminated water is a possible environmental reservoir **(Deborah et al., 2007)**.

H. pylori infection is associated with enhanced gastrin release from human antrum, and increasing evidence suggests a major role of cytokines in the pathogenesis of H. pylori associated gastritis and peptic ulcer disease, in addition to a defective bicarbonate secretion, which normally occurs in response to duodenal acidification. The final result is an increased duodenal acid load in cases of H. pylori infection. The increased serum steroid level and human chorionic gonadotrophin change the pH of gastrointestinal tract in addition to the pregnancy induced GIT dysmotility and altered humeral, and cell mediated immunity in pregnancy all favor activation of H. pylori infection **(Olbe et al., 2000)**.

Aim of the Study

- **Study hypothesis:**

  We suggest that Heliobacter pylori is related to the pathogenesis of Hyperemesis Gravidarum.

- **Study question:**

  Is Helicobacter Pylori infection more common in patients with Hyperemesis Gravidarum?

- **Outcome:**

  The relationship between Helicobacter Pylori and pathogenesis of Hyperemesis Gravidarum.