

# Hyperemesis Gravidarum - A Literature Review

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**Abstract:** *Hyperemesis gravidarum refers to intractable vomiting during pregnancy that leads to weight loss and volume depletion resulting ketonuria and ketonemia. Here has been fall in the incidence during the past 30 years. Now that reduces less than 1 in 1000 pregnancies. The causes of hyperemesis gravidarum were excess chorionic gonadotropin, high serum estrogen, progesterone excess cause relaxation of cardiac sphincter, psychogenic factors and deficiencies of vitamin B6, vitamin B1 and protein. While in the first half of the 1900's theories of hyperemesis were psychological such as rejection of pregnancies. Recently a scientific study shows 94% of women no prior to psychological history. Now mainly the hyperemesis gravidarum cause by pyloric infection and family history of hyperemesis gravidarum. Previously the fetal and maternal mortality is high due to hyperemesis gravidarum. Nowadays, fluid therapy, antiemetics, hydrocortisone and nutritional supplements are available treatment of choice to prevent and reduce mortality ratio.*

**Keywords:** Human chorionic gonodotrophin, psychogenic Factor, pyloric infection, ketonuria, antiemetics

## 1. Introduction

Pregnancy is the time during which one or more offspring develops inside a woman and also known as gestation. The former is by far the most sign of pregnancy is vomiting. It may classify in to simple vomiting and hyperemesis gravidarum. It is a severe type of vomiting, which got deleterious effect on the health of the mother and fetus.

## 2. Literature Reviews

A systemic review and meta analysis conducted on consequences of hyperemesis gravidarum for offspring. The aim of study is to summarize the evidence on short and long term outcome of pregnancies. The data collected from electronic database MEDLINE and EMBASE studies were include the fetal, neonatal and long term outcome of pregnancy complicated with hyperemesis gravidarum. Findings were analysis by using review manager. The result reveals that, 95 % with low birth weight, there was no association with ABGAR, congenital anomalies. One study reveals that association between hyperemesis gravidarum and testicular cancer.

A retrospective study conducted on maternal and fetal outcomes in hyperemesis gravidarum. The aim of the study was to evaluate the maternal characteristics and pregnancy outcomes among women with hyperemesis gravidarum. The data collected from past 6 years report. 193 women had hyperemesis gravidarum among 13053. The result reveals that, 24 % of mothers were requiring hospitalization due to hyperemesis gravidarum.

A systemic study conducted on hyperemesis gravidarum and helicobacter pylori infection. The aim of the study is examining the relationship between hyperemesis gravidarum and helicobacter pylori infection. The data were collected from 1966-2007 using MEDLINE, PUBMED and EMBASE, web of science included MeSH. The samples were diagnosed with the serum antibody sample, gastric biopsy, saliva test or stool sample. 14 case controlled studies involve 1732 participants. The study reveals that, 10 studies showed the significant relationship between hyperemesis gravidarum and pyloric infection.

A systemic review and meta analysis case control studies done on helicobacter pylori infection and hyperemesis gravidarum. The aim of the study examining the association between helicobacter pylori infection and hyperemesis gravidarum. The data were collected from using MEDLINE, PUBMED and EMBASE, ASE, web of science included MeSH, CINAHI during the period 1966-2008. Total 25 case control studies were identified. The data were analyzed by Cochran Q and meta –regression analysis. The results revealed that, weaker association between previous studies and recent studies and it shows that, increased association between pylori infection and hyperemesis gravidarum.

A case control study conducted on association between helicobacter pylori infection and hyperemesis gravidarum. The objective of the study was to assess the relationship between helicobacter pylori infection and hyperemesis gravidarum. In this study, 80 samples were selected. The result concluded that, 75% cases have helicobacter pylori positive in stool examination and 37.5% cases were normal. Hence, there is an association between helicobacter pylori infection and hyperemesis gravidarum.

The prevalence study done on severe nausea and vomiting of pregnancy and hyperemesis gravidarum among relatives of affected individuals. The aim of the study was to determine the prevalence of severe nausea and vomiting of pregnancies among relatives of affected individual. 1224 self reported cases family history data obtained on online survey by hyperemesis education and research foundation between 2003 and 2006. The results revealed that, 19% sisters with a pregnancy history of hyperemesis gravidarum. Hence, family genetic components have a major role in nausea and vomiting.

The descriptive facility based cross sectional study conducted on hyperemesis gravidarum and associated factors in Arba Minch General Hospital. The data collected with semi structured questionnaire. In this study, 183 women were participated. SPSS 20 is used to analysis. The result reveals that, 80% has the hyperemesis gravidarum in their first trimester and 2.1% have after first trimester.

A study done on hyperemesis gravidarum and it's current perspectives. The literature collected from the articles published in past 10 years, the data examine current

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perspectives and recent development in hyperemesis gravidarum. The study result concluded that, despite the prevalence and considerable morbidity associated with hyperemesis gravidarum, good quality research investigating the regular hydration and antiemetics reduce the prevalence and morbidity.

A retrospective study was conducted on outcome of pregnancies complicated by hyperemesis gravidarum. The aim of the study was to evaluate the maternal and neonatal outcomes among women with hyperemesis gravidarum. The data were collected from women who are within 24 weeks of pregnancy, number of time admitted in hospitalization, history of diabetes, hypertension and weight gain among 1,56,091 pregnancies, 1270 had admitted. The study concluded that, the preterm deliveries more in hyperemesis mother while comparing with normal mother.

A qualitative study done on the evaluation and management of hyperemesis gravidarum. In-depth interview used to investigate patient preferences and experience of human chorionic gonadotrophine. In-depth interviews among women who had been hospitalized for hyperemesis gravidarum in North Holland at least once in the past 4 years the interview technique asked about their experience, preferences and suggestions for improvement regarding the hyperemesis gravidarum treatment. The result reveals that, there is increasing care gives knowledge on hyperemesis gravidarum, early medical intervention and nasogastric tube feeding.

A study conducted on current patterns of hyperemesis gravidarum. The aims of the study were to evaluate the recurrence rate of hyperemesis gravidarum in subsequent pregnancies and to elucidate chronological patterns of recurrence of the condition and to analysis maternal, environmental and pregnancy related factors. The data collected from hospital discharge register and medical birth register during 2004 - 2011. The result revealed that, 544 pregnancies with a hyperemesis diagnosis and the overall recurrence rate of the index pregnancy was 24%.

A cross sectional study conducted in Norway to estimate the prevalence variation occurs in maternal and socio economic factor. The data were collected from birth registry which includes the history of hyperemesis gravidarum, age, parity and sex of the fetus. The result showed that, the overall prevalence of hyperemesis gravidarum is 0.89, in Western Europe low prevalence of hyperemesis gravidarum, in India is 3.2 and in Srilanka is 3.3.

A study conducted the prevalence of hyperemesis gravidarum, epidemiological features, complication and outcome. The study conducted during the period of 1985-1988 in Soroka Medical Center. Among 190 patients, 164 patients had hyperemesis gravidarum. The study revealed that, the incidence of spontaneous abortion is 3.1% and the perinatal outcome was not statistically significance with selected variables.

A case study approach used on hyperemesis gravidarum and home care implications. Here, 32 years old Asian women, 4 weeks of gestation, she has severe vomiting, increased

ketone in urine, increased specific gravity, abnormal sodium and potassium, dry tongue and blood pressure 88/60 mm of Hg. She received IV fluid only and recurrently admitted in hospital. After that, she received home remedy with home nurse. In home, the nurse change her dietary schedule like small frequent diet, increases water intake, low fat diet, easily digestible food and range of motion exercise. After that, reduce the hospitalization. So, it suggested that, dietary habits and exercise can reduce the psychogenic factor of hyperemesis gravidarum.

A study conducted on hyperemesis gravidarum pathogenesis and use of antiemetic agent. The data collected from a computerized search such as MEDLINE, PUBMED and EMBASE lilacs, ISI web of science trial from 1960-2010. The study concluded that, there is no evidence that any antiemetic is superior to another with respect to effectiveness.

A double blind randomized cross-over trial conducted on effectiveness of ginger on hyperemesis gravidarum. Total 30 samples selected, one group is experimental group and another one is control group. Each woman swallowed capsule containing 250g ginger or lactose for 4 days. Then interrupted by 2 days, alternative medicine was administered. The severity of symptoms before and after recorded properly. The study revealed that, the severity of vomiting is reduced more while comparing with another group.

A clinical study conducted on comparing the effectiveness of vitamin B<sub>6</sub> and ginger in treatment of pregnancy induced nausea and vomiting. The study conducted in Gazvin university of medical science from I year. One group received vitamin B<sub>6</sub> 40 mg twice a day and another group 250 mg ginger 4 times a day. The study concluded that, there is no difference between both groups.

A pre-experimental study done on effect of yoga on hyperemesis gravidarum. 14 first stage pregnant women were selected as a sample. The pretest-posttest design was used. The data analyzed by wilcoxon matched paired test. The result concluded that, regular yoga helps to reduce the severity of nausea and vomiting.

### 3. Conclusion

Nausea and vomiting are common in pregnancy, occurring in 70-85% of all gravid uterus. But, hyperemesis gravidarum is a severe and intractable form of nausea and vomiting, affecting 0.8 -2.3% of pregnant women. Nowadays, several complementary therapies are available to treat hyperemesis gravidarum.

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