

HYPEREMESIS GRAVIDARUM

INTRODUCTION

Hyperemesis gravidarum refers to intractable vomiting during pregnancy, leading to weight loss and volume depletion, resulting in ketonuria and/or ketonemia. There is no consensus on specific diagnostic criteria, but it generally refers to the severe end of the spectrum regarding nausea and vomiting in pregnancy. It occurs in approximately two percent of all pregnancies in the United States. It can significantly impact the quality of life of women and their families and, unfortunately, may be very challenging to treat.

Hyperemesis gravidarum is extreme, persistent nausea and vomiting during pregnancy. It can lead to dehydration, weight loss, and electrolyte imbalances. Morning sickness is mild nausea and vomiting that occurs in early pregnancy. Hyperemesis gravidarum (HG) is a pregnancy complication that is characterized by severe nausea, vomiting, weight loss, and possibly dehydration. Feeling faint may also occur. It is considered more severe than morning sickness. Symptoms often get better after the 20th week of pregnancy but may last the entire pregnancy duration

DEFINITION

It is a severe type of vomiting of pregnancy which has got deleterious effect on health of the patient and/or incapacitates her day-to-day activities.

Persistent vomiting accompanied by weight loss exceeding 5 percent of pre-pregnancy body weight and ketonuria unrelated to other causes Although, there is no clear demarcation between common pregnancy-related "morning sickness" and HG

CAUSES

The condition might be caused by rapidly rising serum levels of hormones such as HCG (human chorionic gonadotropin) and estrogen. Extreme nausea and vomiting during pregnancy might indicate a multiple pregnancy (you're carrying more than one baby) or hydatidiform mole (abnormal tissue growth that is not a true pregnancy).

Risk factors

- Hyperemesis gravidarum during an earlier pregnancy.
- Primigravidae
- Being overweight.
- Having a multiple pregnancy.
- Being a first-time mother.
- The presence of trophoblastic disease, which involves the abnormal growth of cells inside the uterus.

The etiology of hyperemesis gravidarum is largely unknown, but several theories exist (see pathophysiology). There are, however, risk factors associated with the development of hyperemesis during pregnancy. Increased placental mass in the setting of a molar or multiple gestations has been associated with a higher risk of hyperemesis gravidarum. Additionally, women who experience nausea and vomiting outside of pregnancy due to the consumption of estrogen-containing medications, exposure to motion, or have a history of migraines are at higher risk of experiencing nausea and vomiting during pregnancy. Some studies also suggest a higher risk of hyperemesis in women with first-degree relatives, for instance, if her mother or sister experienced hyperemesis gravidarum.

SIGNS AND SYMPTOMS

Morning sickness can cause decreased appetite, low level nausea, or vomiting. This is different from true hyperemesis because people are typically still able to eat and drink fluids some of the time.

Symptoms of hyperemesis gravidarum are much more severe. They may include:

- Severe, persistent nausea and vomiting during pregnancy
- Salivating a lot more than normal
- Weight loss
- Signs of dehydration, such as dark urine, dry skin, weakness, lightheadedness, or fainting
- Constipation
- Inability to take in adequate amounts of fluid or nutrition
- Fatigue
- Constipation

MEDICAL MANAGEMENT

- To correct fluid & electrolyte imbalance.
- To correct metabolic disturbance.
- To prevent serious complications of severe vomiting.
- Admit the patient
- Open IV line and correct fluids
- Send for relevant investigations
- Maintain an intake-output chart
- Monitor urine output (catheterize the patient)
- Monitor the vitals
- Test the urine periodically for ketone bodies

Dry bland food and oral rehydration are first-line treatments. Due to the potential for severe dehydration and other complications, HG is treated as an emergency. If conservative dietary measures fail, more extensive treatment such as the use of antiemetic medications and intravenous rehydration may be required. If oral nutrition is insufficient, intravenous nutritional support may be needed. For women who require hospital admission, thromboembolic stockings or low-molecular-weight heparin may be used as measures to prevent the formation of a blood clot.

Intravenous fluids

Intravenous (IV) hydration often includes supplementation of electrolytes as persistent vomiting frequently leads to a deficiency. Likewise, supplementation for lost thiamine (Vitamin B1) must be considered to reduce the risk of Wernicke's encephalopathy. A and B vitamins are depleted within two weeks, so extended malnutrition indicates a need for evaluation and supplementation. In addition, electrolyte levels should be monitored and supplemented; of particular concern are sodium and potassium.

Medications

A number of antiemetics are effective and safe in pregnancy including: pyridoxine/doxylamine, antihistamines (such as diphenhydramine), and phenothiazines (such as promethazine). With respect to effectiveness, it is unknown if one is superior to another for relieving nausea or vomiting. Limited evidence from published clinical trials suggests the use of medications to treat

hyperemesis gravidarum. Medicine to prevent nausea is used when vomiting is persistent and poses possible risks to the mother or baby. If a woman cannot take medicines by mouth, the drugs might be administered through an IV or a suppository. Medicines used to prevent nausea include Promethazine, Meclizine and Droperidol.

Nutritional support

Women not responding to IV rehydration and medication may require nutritional support. Patients might receive parenteral nutrition (intravenous feeding via a PICC line) or enteral nutrition (via a nasogastric tube or a nasojejunal tube). There is only limited evidence from trials to support the use of vitamin B6 to improve outcome. An oversupply of nutrition (hyperlimentation) may be necessary in certain cases to help maintain volume requirements and allow weight gain. A physician might also prescribe Vitamin B1 (to prevent Wernicke's encephalopathy) and folic acid.

Alternative medicine

Acupuncture (both with P6 and traditional method) has been found to be ineffective.[32] The use of ginger products may be helpful, but evidence of effectiveness is limited and inconsistent, though three recent studies support ginger over placebo.

HEALTH EDUCATION/PREVENTION

Health Education

Dietary suggestions which may help some women include:

- Advise the patient to rest; eat small, frequent meals that are high in carbohydrate and low in fat.
- Avoid any foods or smells that trigger symptoms.
- The use of ginger products may be helpful. Evidence is limited and lacks consistency but there is some evidence of benefit over placebo.
- Try eating a dry biscuit first thing on waking in the morning before getting up.

Prevention

The only prevention is to import effective management to correct simple vomiting of pregnancy.

COMPLICATION

As hyperemesis gravidarum involves at least two patients, both the mother and the fetus(s) must be considered when discussing complications.

Maternal Complications

In severe cases of hyperemesis, complications include vitamin deficiency, dehydration, and malnutrition, if not treated appropriately. Wernicke encephalopathy, caused by vitamin-B1 deficiency, can lead to death and permanent disability if left untreated. Additionally, there have been case reports of injuries secondary to forceful and frequent vomiting, including esophageal rupture and pneumothorax. Electrolyte abnormalities such as hypokalemia can also cause significant morbidity and mortality. Additionally, patients with hyperemesis may have higher rates of depression and anxiety during pregnancy.

Fetal Complications

Studies report conflicting information regarding the incidence of low birth weight and premature infants in the setting of nausea and vomiting in pregnancy. However, studies have not shown an association between hyperemesis and perinatal or neonatal mortality. The frequency of congenital anomalies does not appear to increase in patients with hyperemesis.

Other complications

- Stress ulcer in the stomach
- Oesophageal tears
- Jaundice due to liver damage

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