Prevalance and Risk Factors of Hyperemesis Gravidarum: A Retrospective Study

P. Nithiyasri[1], S. Monika[1], T. Leelashree[1], G. Lokesh[1], D. Joanie Priya[2]

[1]B.Sc. (Nursing) III Year Students, [2]Guide, M.Sc. (Nursing) Assistant Professor, Department of Obstetrics and Gynecological Nursing, Chettinad College of Nursing, Chettinad Academy of Research and Education, Rajiv Gandhi Salai, Kelambakkam, Kanchipuram District, Tamil Nadu

Abstract

A Retrospective study was conducted to assess the **prevalence and risk factors of hyperemesis gravidarum among antenatal mothers in a selected tertiary care hospital, Kelambakkam, Kanchipuram District, Tamil Nadu, India.** The objectives were to assess the prevalence and risk factors of hyperemesis gravidarum among antenatal mothers by collecting the data from the medical records of the patients and to find the association between risk factors of hyperemesis gravidarum with the selected demographic variables among patients with hyperemesis gravidarum. The literature review was done and organized under various aspects on studies related to prevalence and risk factors of hyperemesis gravidarum among antenatal mothers with hyperemesis gravidarum. The research approach used for the study was quantitative research approach and the design was retrospective design, 47 samples were participated in the study by using convenient sampling technique. Demographic variables are assessed by using the statistical measurement, prevalence and risk factors of hyperemesis gravidarum among antenatal mothers with hyperemesis gravidarum. The level of significance selected was $p<0.05$ level. The collected data was tabulated and analyzed by using SPSS Statistics -21, descriptive and inferential statistics. The study showed that there is significant association between risk factors of hyperemesis gravidarum with selected demographic variables.

Keywords: *Hyperemesis Gravidarum(HG), Nausea and Vomiting (NVP).*

Introduction

Motherhood is an inevitable part of a woman's life. It's a natural law that a woman should carry her baby in her womb for 9 months to undergo the process of labor. From the time the mother starts conceiving the baby, it is called pregnancy and the mother elicits undifferentiated changes in the physical and physiological process of life. The mother experiences some signs and symptoms from the first trimester of pregnancy. As each woman are unique, different mothers experience different signs and symptoms and it is not a must that all women should have the same manifestations.

Background of the Study: Hyperemesis gravidarum refers to intractable vomiting during pregnancy that leads to weight loss and volume depletion, resulting ketonuria and ketonemia.[1]

Hyperemesis gravidarum is defined as persistent vomiting in pregnancy, which causes weight loss (more than 5% of body mass) and ketosis. In severe cases, if inadequately or inappropriately treated hyperemesis may cause Wernicke's encephalopathy, central pontinemyelinolysis and maternal death.[2]

Infants of mothers with Hyperemesis gravidarum have a higher incidence of intrauterine growth restriction

Corresponding Author:
P. Nithiyasri
B.Sc. (Nursing) III Year Student, Department of Obstetrics and Gynecological Nursing, Chettinad College of Nursing, Chettinad Academy of Research and Education, Rajiv Gandhi Salai, Kelambakkam, Kanchipuram District, Tamil Nadu, India-603103
e-mail: nithyasripvn@gmail.com
Phone No: 8072137939

and are significantly smaller at birth. HG affects 1% of pregnant women.[3]

Hyperemesis gravidarum is most often characterized by severe nausea and vomiting that interferes with nutritional intake and metabolism, causes fluid and electrolyte imbalances and commonly requires hospital management.[4]

Hyperemesis gravidarum represents a more severe condition and is potentially lethal if not treated.[5]

Hyperemesis gravidarum affects both the mother and the fetus if the mother has severe intractable nausea and vomiting it leads to many fetal and maternal consequences. If the mother has severe form of hyperemesis gravidarum it may result in maternal complications like nutritional deficiency, psychological impact, electrolyte imbalances and metabolic disturbances were as the fetal complications is behavioral and psychiatric problems, abnormal placentation and risk of malignancy.[6]

The exact cause of hyperemesis gravidarum is unknown but having a history of migraine, hormonal changes (increased human chorionic gonadotropin level), gastrointestinal changes (incidence of gastro esophageal reflux disease), two genes GDF 15 and IGFBP 7 potentially linked with the development of hyperemesis gravidarum. [7]

Hyperemesis gravidarum as persistent and excessive vomiting starting before the end of the 22nd week of gestation and further subdivides the condition into mild and severe, with severe being associated with metabolic disturbances such as carbohydrate depletion, dehydration, electrolyte imbalences.[8]

Hyperemesis gravidarum is characterized by excessive nausea and vomiting in early pregnancy is reported to be associated with the increased risks for low birth weight, preterm birth, small for gestational age and perinatal death. HG is a potentially life threatening condition that occurs between 0.8-3.2%.[9]

Medical complications of hyperthyroidism, psychiatric illness, previous molar disease, gastrointestinal disorders, history of asthma, pre gestational diabetes were significantly has independent risk factors for hyperemesis gravidarum where as pregnancies with multiple fetus has increased risk and decreased risk for maternal age older than 30 and maternal smoking in a review of 1,301 cases from Canada.[10]

Hyperemesis gravidarum is founded to be common in young aged mothers. Women affected by NVP are mostly nonsmoker the incidence of hyperemesis gravidarum is higher in multiple pregnancy, molar pregnancy, fetus with down syndrome and primi gravidity are common obstetric risk factors.[11]

Statement of the Problem: Prevalence and Risk factors of Hyperemesis Gravidarum in a selected Tertiary Care Hospital at Kelambakkam, Kanchipuram District, Tamil Nadu, India.

Objectives of the Study:

1. Assess the prevalence of Hyperemesis Gravidarum with in last two years (2016 to 2018) in a selected hospital.
2. Associate demographic variables with the risk factors of Hyperemesis Gravidarum.

Operational Definitions:

Prevalance: Prevalence is the number of records of mothers diagnosed with Hyperemesis Gravidarum with in last two year (2016-18) in a selected tertiary care hospital.

Risk Factors: Risk factors as taken from the records of mothers diagnosed with Hyperemesis Gravidarum from 2016-2018 like age, weight,history of motion sickness, history of migraines,history of previous molar pregnancy,history of gastro intestinal disorders,history of asthma, multiple pregnancies, gravida, Trimester, psychological disorders (anorexia nervosa or bulimia), History of thyroid disorders, Increased HCG.

Hyperemesis Gravidarum: Hyperemesis gravidarum is a condition causing severe nausea and vomiting in early pregnancy often resulting in hospital admission.

Material and Method

Research Approach: Quantitative research approach was adopted in the study.

Research Design: Retrospective design was used to conduct the study.

Research Setting: Present study was conducted at Medical Record Department in Chettinad Hospital

and Research Institute, Kelambakkam, Kanchipuram District, Tamil Nadu, India. Permission got from the Medical Record Department to check the records for specified data was obtained from the Dean, CHRI.

Population: Data related to antenatal mothers who have got admitted with hyperemesis gravidarum and associated risk factors was obtained from the Medical Records at Medical Record Department.

Sample: The sample in the present study will be records of antenatal mothers with Hyperemesis Gravidarum who had admitted in Antenatal ward at CHRI.

Sample Size: The data was collected from the medical records of mothers with Hyperemesis Gravidarum with in last two year (2016-2018).

Sampling Technique: Convenient sampling technique was adopted in the study.

Sampling Criteria:

Inclusion Criteria: The medical records of mothers with Hyperemesis Gravidarum with in last two year (2016-2018).

Selection and Development of Study Instrument: In the present study the study instrument was medical records.

Data Collection Procedure:

- After obtaining ethical committee clearance and written permission from the Dean and Medical Superintendent, the main study was conducted in Medical record department, Chettinad Hospital and Research Institute.
- The case sheet was selected through convenient sampling technique, the necessary data regarding Risk factors was taken from the records of mothers diagnosed with Hyperemesis Gravidarum from 2016-2018 like age, weight, history of motion sickness, history of migraines, history of previous molar pregnancy, history of gastro intestinal disorders, history of asthma, multiple pregnancies, gravida, Trimester, psychological disorders (anorexia nervosa or bulimia), History of thyroid disorders was collected.
- Investigation like urine analysis, thyroid function test was assessed from the records.
- The duration of data collection was one week from 01.04.2019 to 07.04.2019 at 8.30am to 4.00pm in Medical Record Department. The data was collected on all the days and data confidentiality was maintained.

Findings:

Objective: To assess the prevalence of Hyperemesis Gravidarum with in last two years (2016 to 2018) in a selected hospital.

According to age group:

- Majority of the antenatal mother with hyperemesis gravidarum is 18 to 25 years (44.7%)
- Minority of the antenatal mother with hyperemesis gravidarum is 32 to 38 years (12.8%)

According to weight:

- Majority of the antenatal mother with hyperemesis gravidarum is (42.6%)
- Minority of the antenatal mother with hyperemesis gravidarum is (27.7%)

According to dietary pattern:

- Majority of the antenatal mother with hyperemesis gravidarum is (97.9%)
- Minority of the antenatal mother with hyperemesis gravidarum is (2.1%)

According to gravida:

- Majority of the antenatal mother with hyperemesis gravidarum is (51.1%)
- Minority of the antenatal mother with hyperemesis gravidarum is (48.9%)

Objective 2:

To find out the association between Demographic Variables and risk factors of Hyperemesis Gravidarum

- The finding shows that there is a significant association between age in history of motion sickness.
- The finding shows that there is a significant association between age in history of asthma.
- The finding shows that there is a significant association between dietary pattern in history of migraine

- The finding shows that there is a significant association between gravida in history of molar pregnancy and history of asthma.

The study reveals that there was a significant association of selected demographic variables with risk factors of hyperemesis gravidarum and there is no significant association with other risk factors.

The Mean difference and standard deviation for risk factors and investigation

- The maximum value of mean ±standard deviation in risk factors 1.21±0.508 and the minimum value of mean ±standard deviation in risk factors 0.09±0.282.
- The maximum value of mean ±standard deviation in investigation 1.49±1.196 and the minimum value of mean ±standard deviation in investigation 1.32± 0.471.

Conclusion

The study findings reveals that there is an significant association between the risk factors of hyperemesis gravidarum and selected demographic variables like age, dietary pattern, gravida.

Conflict and Interest: Nil

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Ethical Clearance: Obtained clearance from institutional human ethical committee on 04.02.2019.

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