

A study to Assess the Knowledge Regarding Gestational Diabetes Mellitus among Pregnant Mothers and Self Care Practice of Gestational Diabetes Mellitus Management among Mothers with Diabetes in Pregnancy Attending Selected Hospitals of Kottayam District

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Abstract

The study was conducted to assess the knowledge regarding Gestational Diabetes Mellitus among pregnant mothers and self care practice of Gestational Diabetes Mellitus management among mothers with diabetes in pregnancy attending selected hospitals of Kottayam District. The objectives were to assess the level of knowledge regarding Gestational Diabetes Mellitus among pregnant mothers, to assess the self care practice of Gestational Diabetes Mellitus management among mothers with diabetes in pregnancy, to find association between level of knowledge regarding Gestational Diabetes Mellitus and selected demographic variables, to find correlation between knowledge and self care practice of Gestational Diabetes Mellitus management among mothers with diabetes in pregnancy. The research design used in the present study is non experimental descriptive design. The study was conducted among 60 antenatal mothers and 15 mothers with gestational diabetes mellitus by using non probability convenient sampling technique. In the present study it was found that 33.3% mothers had poor knowledge, 33.3% had average knowledge and 33.3% had good knowledge regarding Gestational diabetes mellitus. When comes to practice 46.7% had satisfactory practices and 53.3% had good practice. There is a positive correlation between knowledge and practice ($p=0.04$).

Keywords: Gestational diabetes mellitus, Knowledge, Practice.

Introduction

Pregnancy is one of the wonderful and noble services imposed by nature which no women can shrink. It is a period of happiness, excitement, expectancy, anxiety and fear.¹ Some common maternal health condition or problems a women may experience during pregnancy are Anemia, UTI, Mental health condition, Hypertension, Gestational Diabetes mellitus, Obesity and Weight gain, Infection, Hyper emesis gravidarum.²

Diabetes Mellitus is a metabolic disorder that affects carbohydrate, fat and protein metabolism.³ Today the majority of the women have Type 2 diabetes or diabetes during pregnancy. International Diabetes Federation says that the prevalence of high blood glucose in pregnancy

increase rapidly with age and is highest in women of 45 in 2017.³

The main cause and risk factor of Gestational Diabetes Mellitus are age > 25 years, pre-gestational obesity or excessive weight gain during pregnancy, family history of diabetes, personal history of poor obstetric outcome such as polyhydramnios, macrosomia, pre-eclampsia, fetal malformation of an ethnic group with a high risk prevalence of diabetes and history of Diabetes Mellitus in previous pregnancy.⁴

Diabetes during pregnancy has been associated with increased perinatal mortality, an increased rate of caesarean sections, significant risk of macrosomia, and other neonatal morbidities, including serious birth

trauma, hypoglycemia, hypocalcemia, polycythemia and hyperbilirubinemia. Management is therefore directed toward reducing perinatal mortality and morbidity, a goal that may be achieved by maintaining close surveillance of the mother and fetus and stringent glucose control.⁵

Need for Study: Diabetes is a metabolic disorder characterized by resistance to the action of insulin, insufficient insulin secretion or both. Diabetic Mellitus is the most common metabolic disorder that complicates 3-5 % of all pregnancies and is a major cause of perinatal morbidity and mortality as well as maternal morbidity.⁶

As the incidence of both obesity and Diabetes Mellitus among woman of child bearing age continue to raise well, so as the prevalence of hyperglycemia in pregnancy. Gestational Diabetes Mellitus develops in 1 in 25 pregnancies worldwide. According to American Diabetic Association Gestational Diabetes Mellitus is common condition affecting 7% of all pregnancies. Depending on the population sample and diagnostic criteria, prevalence range from 1-14 %.⁷

It is the most common metabolic disorder in pregnant women, associated with serious maternal and neonatal complications. This phenomenon is initially diagnosed during late pregnancy. It is predicted that the number of diabetic patients is projected to double by 2030, which will also affect pregnant women⁸

A prospective study on the prevalence of carbohydrate intolerance of varying degree in pregnant woman in western India (Maharashtra) .On 2005 -2007 the sample size were 1225 woman with average age of 25 to 40 years. The result shows that the prevalence of Gestational Diabetes Mellitus was 21.6% and concluded that Gestational Diabetes Mellitus affect one fifth of pregnant female from western India.⁹

From the above studies, it clearly shows that Gestational Diabetes Mellitus drastically increasing year by year now it is a serious complication during gestational period which affect both mother and child. Gestational Diabetes Mellitus is an intense field of research study. It shows that prevalence of Gestational Diabetes Mellitus increases by 45% but still knowledge regarding Gestational Diabetes Mellitus and self care management is very low. Hence the investigator felt that this study would help the antenatal woman to enhance their knowledge regarding Gestational Diabetes Mellitus and self care practice of Gestational Diabetes Mellitus management which in turn would help to prevent

complication during pregnancy.

Statement of the Problem: “A study to assess the knowledge regarding Gestational Diabetes Mellitus among pregnant mothers and self care practice of Gestational Diabetes Mellitus management among mothers with diabetes in pregnancy in selected hospitals of Kottayam District.

Objectives of the Study:

1. To assess the level of knowledge regarding Gestational Diabetes Mellitus among pregnant mothers
2. To assess the self care practice of Gestational Diabetes Mellitus management among mothers with diabetes in pregnancy.
3. To find correlation between knowledge and self care practice of Gestational Diabetes Mellitus management among mothers with diabetes in pregnancy.

Hypothesis:

H₁: There is a significant correlation between knowledge and self care practice of Gestational Diabetes Mellitus management among mothers with diabetes in pregnancy.

Methodology:

Research Approach: Non experimental descriptive design

Research Design: Descriptive research design

Variables: Study variables are knowledge and practice

Setting: The study was conducted in Carmel Medical centre, Pala, Marian medical centre Palai.

Sample: Sample include 60 antenatal mothers and 15 mothers with gestational diabetes in selected hospitals in kottayam.

Sampling Technique: Non probability purposive sampling

Tool and Technique: Structured questionnaire is prepared with the help of review of literature, personal experience and discussion with experts. The questionnaire is categorized into 3 sections.

Section 1: Consists of socio demographic data which include age monthly income, education, occupation, religion, previous history of Gestational Diabetes Mellitus etc.

Section 2: It consists of question regarding knowledge regarding Gestational Diabetes Mellitus.

Section 3: It contains questions regarding self care practice of Gestational Diabetes Mellitus management.

Method of Data Collection: The formal permission for data collection was obtained from concerned

authority. The actual study was conducted on 11/09/2019 to 11/10/2019. By purposive sampling technique, the investigator identified 60 antenatal mothers and 15 mothers with gestational diabetes based upon inclusion and exclusion criteria. Prior to data collection, purpose of study was explained to the subjects to gain co operation. The written consent was obtained and the investigator requested to to read the instruction on the questionnaire and fill it. The data was collected and was then compiled for analysis.

Table 1: Knowledge regarding GDM among pregnant mothers n=60

Knowledge range	Range percentage	Categories	Frequency	%
0-7	0-50%	Below average	20	33.3%
8-10.5	51-75%	Average	20	33.3%
10.6-14	76-100%	Below average	20	33.3%

Table 2: Self care practice of Gestational Diabetes Mellitus management among Gestational Diabetic mothers n=15

Practice range	Range percentage	Categories	Frequency	%
0-16.5	0-50%	Poor	0	0%
16.6-25.5	51-75%	Satisfactory	7	46.7%
24.6-33	76-100%	Good	8	53.3%

Table 3: Relationship between knowledge and practice n=15

Variables	Mean	Standard deviation	Correlation	Value
Knowledge	9.60	2.58	0.043	0.880
Practice	23.80	3.09		

Table shows the calculated correlation coefficient (r) was 0.880 which indicate that there was a positive correlation between knowledge and practice.

Discussion

In the present study, 73.3% of pregnant women belong to the age group of 20-30 years and 26.7% belongs to the age group of 30-40 years. 41.67% of mothers were Hindus, 41.67% were Christians and 16.6% were Muslims. In the present study it was found that 33.3% mothers had poor knowledge, 33.3% had average knowledge and 33.3% had good knowledge regarding gestational diabetes mellitus. The above findings can be supported by a study conducted among 30 mothers attending antenatal clinics of Mangalore

to assess the level of knowledge regarding gestational diabetes mellitus and self care management. The results showed that 26.60% of women had poor knowledge and 20% had good knowledge.¹⁰

In the present study 46.7% had satisfactory practices and 53.3% had good practice. The results of this study is contradictory to the study conducted among Diabetes Patients in Dhaka City, Bangladesh in the year 2016 which showed that majority of patients reported regular routine follow up diet and exercise etc. for controlling DM. However, glycemic control was poor among 46.67% of respondents and 62.38% patients never performed self-blood sugar test due to lack of knowledge or lack of the feeling of necessity to do it.¹¹ The present study

shows that there is positive correlation ($p=0.04$) between knowledge and self care practice of gestational diabetes mellitus management among mothers with diabetes in pregnancy.

Recommendations:

1. Similar study can be replicated with large sample in different settings.
2. A cross sectional study can be done to test the effectiveness of the instructional module

Conclusion

Pregnancy is a period of great change for the women in both physiological and psychological aspects. The women should adapt with these changes for the successful outcome of the pregnancy. From the present study the result showed that 33.3% had above average knowledge, 33.3% had average knowledge and 33.3% had below average knowledge regarding the gestational diabetes mellitus and the self care management. The present study shows that 46.7% had satisfactory practices and 53.3% had good practice. There is a positive correlation between knowledge and practice ($p=0.04$).

Conflict of Interest: Nil

Source of Funding: Self

Ethical Consideration: Ethical clearance was obtained from ethical committee, Govt. Medical College, Kottayam. Informed written consent was taken on the selection of the subjects. Full confidentiality was maintained throughout the study.

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