Nursing Intervention for Pregnant Women to Control Gestational Diabetes

Thesis

Submitted for Partial Fulfillment of the doctorate Degree
in Community Health Nursing

By
Naglaa Mohamed Talaat Ahmed Gebril
B.S.c nursing - Ain Shams University

Faculty of Nursing
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Under Supervision

Prof. Dr/ Faten Khayrat El-Guindy

Professor of Community Health Nursing
Faculty of Nursing-Ain Shams University

Dr/ Omaima Mohamed Esmat

Assistant Professor of Community Health Nursing
Faculty of Nursing – Ain Shams University

Dr/ Hala Mohamed Mohamed

Assistant Professorof Community Health Nursing
Faculty of Nursing – Ain Shams University

Faculty of Nursing
Ain Shams University

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Naglaa Mohammed Talaat

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List of Abbreviations

Abbr.	Full-term
ACOG	**A**merican**C**ollege Of **O**bstetricians &**G**ynecologist
ADA	**A**merican **D**iabetes **A**ssociation
CHO	**C**arbohydrates
FDA	**F**ood &**D**rug **A**dministration
GCT	**G**lucose **C**hallenge **T**est
GDM	**G**estational **D**iabetes **M**ellitus
GTT	**G**lucose **T**olerance **T**est
MNT	**M**edical **N**utritional **T**herapy
NDDG	**N**ational **D**iabetes **D**ata **G**roup
NIDD	**N**on **I**nsulin **D**ependence **D**iabetes

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ABSRACT

Gestational diabetes mellitus is a public health concern that currently affects a large proportion of the female population and has short and long- term consequences for the fetus and the mother. **Aim:** The aim of this study was to evaluate the efficacy of nursing intervention in controlling gestational diabetes for pregnant women.**study design:** Qusi – experimental design**. Sample:** Purposive sample 116 women diagnosed with gestational diabetes aged from 20 to 35 year free from any disease and at a period after 23 weekaof pregnancy.**study setting:**the study conducted at outpatient clinic in Ain Shams University, Maternity Hospital.**tools**: three toolswere used for data collection, **first tool:** anInterviewing Questionnaire which divided into three partsthe first for assessing women socio demographic characterstics, the second part for assessing knowledge about gestational diabetes, the third tool for assessing health need.**second tool:** Physical assessment sheet. **Third tool** follow up after program. **Result:** the finding of this study proved the effect of the health educational program on women with gestational diabetes through highly ststistical significant diferrence between knowledge score level of women **Conclclusion**: The education program had a positive impact on knowledge and practice regarding GDM.**Recommendations:**the outpatient clinic staff should provide GDM educational booklets for pregnant women including practices related to diet, exercises, and compliance with the treatment to improve their health and prevent complications

Key Words: Pregnant women, gestational diabetes

Introduction

Gestational diabetes mellitus (GDM), defined as hyperglycemia diagnosed at pregnancy, has been associated with many adverse maternal and newborn outcomes, especially increased number of cesarean deliveries, newborns large for gestational age, and macrosomia According to diagnostic criteria (the prevalence of GDM ranges from 1.7 to 11.6%. The prevalence of GDM could be as high as 18% in some regions ***(Wang et al., 2013).***

GDM can occur as a result of the normal hormonal changes a pregnant woman's body experiences. During pregnancy, the placenta produces hormones that interfere with the actions of the hormone insulin. In a normalpregnancy, the woman's pancreas produces insulin, can compensate for this bymaking additional insulin during pregnancy.However, if the pancreas cannot keep up with the body's demand for more insulin, GDM may be developed ***(Schmitz, 2010).***

GDM is an important public health issue and women with gestational diabetes mellitus (GDM) are more likely to develop type II diabetes up to six times compared with women with a normal glucose tolerance during pregnancy ***(Xiang et al., 2011).***

The role of the community health nurseing Maternal and Child Healthcenters is the prevention or reducing complications and its impacts on pregnant women andher infant through the intervention by the educational programs to help pregnant women comply with the treatment and with the diet regimen throughout their pregnancy period. Also CHN roles include the collaboration with physician in the screening, diagnosis, and management of the health problem; to consume valid research findings in nursing practice, and to participate in research studies trying to decrease the problem of GDM in pregnancy ***(Allender & Spradly, 2010).***

Nurses working in perinatal settings are in a unique position to screen, monitor and provide nursing care to women who are affected by complications during pregnancy.The nurse working with women who are diagnosed with gestational diabetes mellitus is often responsible for teaching the patient how to self-monitor and record glucose and ketones at home. In addition, the nurse can teach patients about proper diet and safe exercise during pregnancy.During prenatal visits, the nurse reviews the blood glucose and diet logs to make recommendations about monitoring, medication administration, and diet. Patients may also need to learn how to self-administer insulin. The nurse should make sure the patient could comfortably and appropriately check blood glucose levels and administer insulin by requesting a return demonstration ***(ADA, 2008).***

Significance of the Study

GDM is a form of diabetes that occurs in pregnant women.Itusuallycausesonlymild symptoms similar to those of early Type 2 diabetes,and is thus often only diagnosed by specific screening in the 24^{th}-28^{th} week of pregnancy, some cases sadly remain undiagnosed. GDM can cause serious complications for the baby and the mother, so early diagnosis and ongoing treatment is important for a good outcome ***(wrongdiagnosis.com, 2007).***

The prevalence of GDM varies from 0.15 to 12.3% of pregnant women depending on the location, ethnicity and screening procedure. This makes it the most common medical disorder occurring during pregnancy. It seems to occur only rarely in women younger than 20 years of age. 40 to 60% of them may develop Non Insulin Dependence Diabetes Mellitus (NIDDM) in 15 to 20 years ***(Maurice et al., 2006).***

In Egypt gestational diabetes occurs at a rate of 3.5% with definite maternal and fetal morbidities Diabetes with pregnancy put both pregnant woman and her fetus at great risk, 21% of pregnant diabetics develop urinary tract infection, 14% may require cesarean section,7% may develop pre-eclampsia,starvation ketosis and post partumhaemorrhage. High maternal age and parity together with strong family history of diabetes are important risk factors for development of gestational diabetes ***(Radwan & ShahinazGadalah, 2002).***

Aim of The Work

The aim of this study is to evaluate the efficacy of nursing intervention in controlling gestational diabetes for pregnant women through:

- Assessing health needs and problems for pregnant women with gestational diabetes.
- Assessing pregnant women knowledge about gestational diabetes mellitus.
- Impact of program on controlling gestational diabetes for pregnant women .
- Evaluating the effect of nursing intervention on control gestational diabetes.

Hypnosis

Nursing intervention well control pregnant women with gestational diabetes mellitus.

Review of Literature

Part 1:Gestational Diabetes Mellitus

Gestational diabetes mellitus is a public health concern that currently affects a large proportion of the female population and has short and long- term consequences for the fetus and the mother. It has been reported that gestational diabetes complicates 1%-14% of all pregnancies worldwide and its incidence has been steadily rising. Gestational diabetes is a major cause of perinatal morbidity and mortality, as well as maternal morbidity ***(Schneider at el., 2012).***

In Egypt the annual incidence of gestational diabetes mellitus is about 37,778 cases ***(wrongdiagnosis.com, 2006).***

Gestational diabetes mellitus (GDM) is a common metabolic disorder that occurs during pregnancy. GDM can cause significant problems, including maternal complications ***(Takashi, 2011).***

Gestational diabetes mellitus (GDM) is defined as any degree of glucose intolerance with onset or first recognition during pregnancy. The definition applies whether insulin or only diet modification is used for treatment and whether or not the condition persists after pregnancy ***(ADA, 2010).***

Gestational diabetes mellitus is the most common medical disorder of pregnancy and affects approximately 4%-10% of pregnant women in the United States each year Women with a history of GD have a 35-60% chance ofdeveloping type 2 diabetes (DM) and are 3.5 times more likely to develop DM than individuals in the general population ***(Pridjian & Benjamin, 2010)***

Epidemiology of gestational diabetes

GDM typically occurs around 24th week of pregnancy. According to the American Diabetes Association, gestational diabetes typically affects 18 percent of all pregnant women ***(Brindles, 2012).***

The prevalence of diabetes mellitus (DM) is increasing worldwide and more so in developing countries such as India Along with the rising tide of the current epidemic of diabetes, the prevalence of gestational diabetes mellitus (GDM), defined as any degree of glucose intolerance with onset or first recognition during pregnancy, is also on the rise GDM increases the risk of complications in both the mother and child and early detection and management improves outcomes for both ***(Nallaperumal et al., 2013).***