



KNOWLEDGE OF PREGNANT WOMEN ABOUT GESTATIONAL DIABETES MELLITUS

CONHECIMENTO DE GESTANTES SOBRE DIABETES MELLITUS GESTACIONAL

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ABSTRACT

Objective: to identify the knowledge of pregnant women with gestational diabetes mellitus about their illness and self-care measures for therapeutic follow-up. **Method:** descriptive study, with analysis of the Collective Subject Discourse. For data collection, a semi-structured interview script was used with recording system, performed from January to March 2011, with ten pregnant women defined by saturation, according to approval by the Committee of Ethics in Research, UFPE (383/10). **Results:** from the analysis of interviews, two categories emerged: Knowledge of pregnant women about gestational diabetes and knowledge about self-care measures for therapeutic follow-up. **Conclusions:** pregnant women showed superficial knowledge about the gestational diabetes and reported difficulties in the dietotherapy follow-up and practice of physical activity, which can influence the promotion of self-care, treatment and control of the disease. **Descriptors:** pregnancy; gestational diabetes mellitus; health education; nursing.

RESUMO

Objetivo: identificar o conhecimento de gestantes com diabetes mellitus gestacional sobre a doença e as medidas de autocuidado para o seguimento terapêutico. **Método:** pesquisa descritiva, com abordagem qualitativa, conduzida pelas questões: o que você sabe sobre o diabetes gestacional? O que você sabe sobre os cuidados para o seguimento do tratamento? O estudo foi realizado no Ambulatório da Mulher do Centro Integrado de Saúde Amaury de Medeiros (CISAM), em Recife-PE, com dez gestantes, definidas por saturação, atendidas no ambulatório de pré-natal, após o atendimento de critérios de inclusão e exclusão. Os dados foram coletados com gravação durante abril e maio de 2011, que além das questões de pesquisa, aplicou-se um formulário. As entrevistas gravadas foram transcritas na íntegra e após leituras exaustivas e repetidas, extraíram-se as ideias centrais e as expressões-chave. O estudo foi aprovado pelo Comitê de Ética e Pesquisa do Centro de Ciências da Saúde, da Universidade Federal de Pernambuco (UFPE), protocolo nº 383/10 e CAAE nº 0382.0.172.000-10. **Resultados:** a partir da análise das entrevistas, emergiram duas categorias: **O conhecimento das mulheres grávidas sobre diabetes gestacional; Conhecimento sobre as medidas de autocuidado para o seguimento terapêutico.** **Conclusões:** as gestantes apresentaram conhecimento incipiente sobre o diabetes gestacional, além de relatarem dificuldades para o seguimento da dietoterapia e prática da atividade física, fato que pode influenciar na promoção do autocuidado, do tratamento e controle da doença. **Descritores:** gravidez; diabetes mellitus gestacional; educação em saúde; enfermagem.

RESUMEN

Objetivo: identificar el conocimiento de gestantes con diabetes mellitus gestacional sobre su enfermedad y las medidas de autocuidado para la continuación terapéutica. **Método:** estudio descriptivo, con análisis del discurso del sujeto colectivo. Para la recopilación de datos se utilizó un guión de entrevista semiestructurada con sistema de grabación, realizada de enero a marzo de 2011, con diez gestantes definidas por saturación, según la aprobación del Comité de Ética en Investigación de la UFPE (382/10). **Resultados:** a partir del análisis de las entrevistas surgieron dos categorías: El conocimiento de las mujeres embarazadas sobre diabetes gestacional y conocimiento sobre las medidas de autocuidado para la continuación terapéutica. **Conclusiones:** las gestantes demostraron conocimiento superficial sobre la diabetes gestacional y relataron dificultades para la continuación de la dietoterapia y de la práctica de actividad física, hecho que puede influir en el fomento del autocuidado, del tratamiento y el control de la enfermedad. **Descriptores:** embarazo; diabetes mellitus gestacional; educación en salud; enfermería.

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INTRODUCTION

The pregnancy constitutes a unique period in the life of the woman and her family. This phase, in general, is marked by the need for adjustments, especially with regard to identity, the definition of roles and the information and educational practices for better understanding of changes in pregnancy and puerperium cycles.¹

In most cases, pregnancy does not show abnormalities, but there are a number of women, which have specific characteristics or because they suffer diseases such as hypertension or gestational diabetes mellitus (GDM) have a higher probability of an adverse evolution. So, they may be sorted as high-risk pregnant women.²

The GDM is a condition characterized by glucose intolerance of varying degrees of intensity, starting or being first diagnosed during pregnancy and may or may not persist after childbirth.³ Thus, women who have GDM need special attention by the multidisciplinary team, because of the risks that may affect the balance of both: mother and child. This includes constant explanations about this disease, treatment and, above all, continuing health education, aiming the self-care.

However, clinical practice has shown that little is known about the knowledge that women with gestational diabetes have about this pathology, its respective treatment, as well as self-care measures practiced in daily life. Providing quality information during pregnancy is recommended by the action from Program for Humanization of Prenatal, thus beyond to guarantee minimum standards to ensure health care for pregnant women, educate and make women more participant; may help to reduce the maternal morbidity and mortality.

When considering the aspects mentioned, the research aimed to identify the knowledge of pregnant women with gestational diabetes mellitus (GDM) of this disease and self-care measures for continuing the therapeutic treatment.

METHOD

Descriptive research, with qualitative approach, conducted by the following guiding questions: What do you know about gestational diabetes? What do you know about caring for the follow-up of treatment?

The research was performed at the Women's Medical Clinic of *Centro Integrado de*

Saúde Amaury de Medeiros (CISAM), in Recife/PE (Brazil); in the case, it is trend-setting health institution in assisting high-risk patients and the training of professionals in women health in the State of Pernambuco.

The subjects of this study were ten pregnant women attended in the prenatal outpatient clinic, chosen for accessibility, considering the aspect of voluntariness. For this purpose, we used the following inclusion criteria: having gestational diabetes; be attended in the sector of prenatal in the above mentioned institution; have the physical and cognitive abilities to respond to the semi-structured interview.

The definition of the number of participants was performed by saturation, whereas the sampling closure by theoretical saturation is operationally defined as the suspension of adding new ones when the obtained data start to present, on investigator assessment, redundancy or repetition.⁴

The data were collected with the aid of the recording system during April and May 2011. Beyond the guiding questions, it was applied a questionnaire to obtain socioeconomic data and information about reproductive history.

The recorded interviews were transcribed verbatim. After exhaustive and repeated reading, we drew up the main ideas and key phrases that each of the diabetic women presented in the speeches. Then, it was identified the similarities between the key expressions for the emergence of the Collective Subject Discourse (CSD).⁵ Thus, the data were grouped into two categories: knowledge of pregnant women on gestational diabetes and knowledge about self-care measures for continuing the therapeutic treatment.

The study was approved by the Ethics and Research Committee from Center of Health Sciences of *Universidade Federal Pernambuco (UFPE)*, under Protocol nº 383/10 and CAAE nº 0382.0.172.000-10. The participants signed a Free and Informed Consent Form (FICF).

RESULTS AND DISCUSSION

• Characterization of the participants

Among pregnant women investigated, it was predominant the age between 25 and 35 years. As for labor activities, five were included in the labor market and the rest were housewives. With regard to schooling, four had concluded the high school course and four did not complete it; and two even did not complete the elementary school. About

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marital status, three were married and the others lived in a stable relationship.

In relation to obstetric and gynecological data, it was prevailed parity with an average of two births, the majority of normal childbirths. Six reported no abortion; three suffered spontaneous abortion and one, had induced abortion. Three had gestational diabetes in previous pregnancy, two had macrosomic sons. Regarding family history, eight had a family history of diabetes.

The presence of one or more risk factors, including family history of diabetes in relatives of first degree, obesity, history of gestational diabetes, glycosuria and fetal macrosomia, identify, unequivocally, high-risk group for developing gestational diabetes.⁶

Moreover, among the main determinants of macrosomia, we highlight advanced maternal age, multiparity, pre-pregnancy obesity, as well as excessive gestational weight gain. The occurrence of macrosomia has been associated with increased risk of cesarean birth, birth trauma and childhood morbidity, especially when associated with gestational diabetes.⁷

In relation of the current pregnancy, eight women had more than six consultations in accordance with the recommendations for prenatal care. Regarding nutritional status, according to Body Mass Index (BMI), five women were obese, three were overweight and two had the appropriate weight. Of these patients, nine followed a diet with restriction of sugar and salt. The prevalence of overweight and / or obesity demonstrates an association between obesity and GDM. The excessive weight gain during pregnancy constitutes a risk factor for gestational diabetes and macrosomia.⁸

A pregnant woman had been using insulin Neutral Protamine Hagedorn (NPH). Five women had a history of hospitalization due to DMG, and five women had some kind of disease (toxoplasmosis, bone dysplasia and arterial hypertension) associated with the DMG.

• Selected categories

• CSD 1 - Knowledge of pregnant women about gestational diabetes

In my point of view the baby get fat and I understand they can not eat sugar or fruits that have sugar, or mass that also turns blood sugar [...]. Is sugar in blood, now the gestational I understand that it is only during pregnancy, after the childbirth it pass [...] Once I have the baby I will not have this

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additional diabetes. But I will continue in the diet, not as strict as I am doing, but I'll be more careful because in my family, there is my grandmother who died of diabetes.

By analyzing the speeches of each researched pregnant woman, were observed: the context of life, encompassing culture, beliefs, customs, moral values, which directly influenced the results of knowledge and continuing of treatment of GDM.

The CSD 1 indicated a poor knowledge of the women surveyed about the disease, limiting the need for withdrawal of sugar from the diet, characterized as a disease resulting from excess of sugar in blood. Moreover, reported that the baby was born overweight.

The problems surrounding the gestational diabetes go on beyond the aspects rated by the interviewees; this disease causes fetal compromise, due primarily from the maternal hyperglycemia, which through facilitated diffusion reaches the fetus. The fetal hyperglycemia, in turn, provides overproduction of insulin which interferes in the fetal homeostasis, triggering: macrosomia, fetuses with sizes greater than their gestational ages (knowledge appointed by the interviewees), increased rates of caesarean births, childbirth canal trauma and shoulder dystocia, hypoglycemia, hyperbilirubinemia, fetal hypocalcemia and polycythemia, neonatal respiratory disorders and intrauterine fetal death.⁹

From the results, it is imperative to note that pregnant women who develop GDM, beyond those mentioned problems, have a high risk of recurrence in future pregnancies and risk of 20% to 40% for developing diabetes mellitus (DM) type 2, in a period of 10 to 20 years. However, the maintenance of proper diet, weight control and regular physical activity can help prevent the development of diabetes - type 2.¹⁰⁻¹¹

Therefore, it is necessary to realize an educational action for aware the pregnant women about the importance of the knowledge of GDM as an integral part of prenatal care, providing better living with the disease, making them the protagonists of the treatment, in order to control the disease and its complications.¹²

The health professionals have a responsibility to assist pregnant women in the practice of self-care, teaching them about the disease, the continuous self-monitoring of glucose, relevant cares to diet and physical exercises, to ensure behavior change and effective participation in treatment.

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The reflection and discussion, in programs of educational interventions, and aspects related to the deleterious effects of GDM in the lives of women, lead to greater awareness of the benefits that the pre and post-diagnosis cares brings, as ways to prevent physical harm to binomial - mother-child.

Know and recognize the disease as a factor which may interfere physically in health, resulting in limitations in the short and medium term, it can take the pregnant women to adopt preventive behaviors, from the degree of threat they perceive the reality in which they live.

Studies in Brazilian national literature on attitude and knowledge of pregnant women with diabetes mellitus are scarce.¹³⁻¹⁴ Knowledge is a continuous process, since the person in chronic health condition needs to understand the changes that occur in its body to face them in the daily live and achieve quality of life.¹⁵

However, it is recognized that knowledge about the disease is essential in preventing complications in the performance of self-care and maintenance of metabolic control.

• CSD 2- Knowledge about self-care measures for continuing therapeutic treatment

I know I have to follow some rules [...] in the diet: Eat no sugar, no salt, not eating something very sweet, pasta, wheat, only rye bread or stale bread, drink plenty of fluids. I'm eating well because I'm doing well for her (child), and to be doing well for it, is doing well for me too [...] Who lives in a suburb is difficult to find skim milk, a 'whole meal' bread ... just once, just giving way to eat other foods [...] When you are admitted here comes all ready, but at home you have to do your food differently and still make the food of others. It is difficult, but I'm holding, following the letter [...] I'm walking and doing stretches, but not every day. I'm resting a lot because the doctor said it was bad to be doing much thing that could speed up metabolism.

The continuing therapeutic treatment for gestational diabetes requires a change in eating habits, regular exercise practices; glycemic control and insulin application. So, it is necessary the acquisition of knowledge about the disease.

In the CSD 2, the information about the care was superficial and focused on the diet from the perspective of concern for the welfare of the child and not approached the

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understanding of the recommendations of professionals in the service for continuing therapeutic treatment.

When they expressed themselves on the knowledge of the prescribed cares, the care model received should be based on active participation of the patient for treatment, this finding supports a study that sought to learn the social representations about the care of people with diabetes mellitus.¹⁶

A study developed in the city of Fortaleza/CE (Brazil) that investigated self-care in diabetic pregnant women found deficits related to diet, physical activity, sleep and rest, and social interaction, associated with non-incorporation of pregnant diabetic to treatment and behaviors inherent in the style of healthy life, influenced by external factors such as socioeconomic status, fears and anxiety, lack of time and unwillingness to physical activities, poor sleep reconciliation and altered mood.¹⁷

The self-care should be understood as understanding of the individual needs of health that can sustain and ensure the purpose of life.¹⁷ In this sense; the pregnant women need support from health professionals. The practice of the nurse, when centered in the setting of health education, leads to effective learning of self-care, providing better quality of life for these women.

In the CSD 2, it was evidenced the concern of pregnant women with feed, which tried to follow the diet oriented. Initial treatment of GDM should include the prescription of a balanced diet that allows for adequate weight gain, according to the individual nutritional status of the patient, assessed by BMI.¹⁸

However, the women interviewed were facing difficulties related to socioeconomic factors, which hindered the acceptance to the recommendations of health professionals. This fact was also described in another study that showed that failure to follow the prescribed diet, by eating greater amounts of calories, makes women are subject to severe hyperglycemia or hypoglycemia. The modification of diet is essential factor to control glucose levels in diabetic pregnant women and considered an important aspect of treatment.¹⁷

The diet should consist of 35-40% carbohydrates, 20-25% protein and 35-40% lipids. Even in obese patients, caloric restriction should be instituted cautiously because of the susceptibility of diabetic pregnant women with protein malnutrition.

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This situation has been implicated in the development of macrosomia and future occurrence of diabetes - type 2 - in the fetus.¹⁹

Another measure of self-care for continuing therapeutic treatment of GDM is physical activity that should be stimulated in a cautious manner. It is considered safe when it is not strenuous, does not cause fetal stress or uterine contractions. The patients who practiced physical exercise before pregnancy should continue to practice them. For sedentary and / or obese are recommended aerobic exercise such as walking and aerobics, with gradual beginning and, if possible, monitored.¹⁹

Regular physical activity combined with diet has as main objective to reduce glucose intolerance through cardiovascular conditioning, which causes an increase in binding and affinity of insulin to its receptor by decreasing intra-abdominal fat, increase in glucose transporters sensitive to insulin in muscles, elevation of blood flow in sensitive tissues to insulin and reducing of levels of free fatty acids. Moreover, muscular consumption is responsible for the 75% removal of blood glucose.²⁰

It was noticed that some pregnant women improved glycemic control and glycated hemoglobin, after three weeks, with diet and exercise program assisted over 20 minutes, three times per week, when they were compared to the others that followed only diet.²⁰

For pregnant women who do not get glycemic control through non-pharmacological treatment, it is necessary the introduction of insulin therapy, this practice is defined by means of clinical evaluation.¹⁹

Add to that the health education, if focused on dialogical and participatory model, emphasizes the interpersonal exchange and provides acceptance of the disease, knowledge acquisition, improve in self-care and quality of life. It can be done through newsletters, group dynamics, thematic workshops, informal conversations, among others, aiming to ensure a multidisciplinary and individualized care for the subjects involved in this process.²¹

The nursing professionals have an essential role in the prenatal period and may act in educational activities, sensitizing women about self-care. The obstetrician nurse must be inserted into health teams, as have detailed knowledge about care of the GDM and specialized training in obstetrics matters.

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Since, nevertheless, work with multidisciplinary team, because each member must contribute in attending these women and, consequently, these practices should be complementary.¹⁸

From this perspective, health education is essential in order to provide these women learning to furnish conditions for their self-care, especially in regard to give effect to the measures necessary for the interaction with gestational diabetes mellitus.

CONCLUSION

The pregnant women reported superficial information about gestational diabetes mellitus, which can influence the promotion of self care, treatment and disease control.

The prenatal care is an opportunity for pregnant women to receive guidance on the GDM, they should be informed of main aspects, the importance of diet, physical exercise practice, and discuss about the difficulties experienced, so they can face them during continuing of therapeutic treatment.

It is recommended to repeat practice of health education by nursing professionals in the research place. In relation to the points found, in order to recognize the difficulties met by users of the service and changing needs for implementation of the full care.

Before the above mentioned theme, this study contributes to make a critical reflection about the activities of a nurse as a member of the health team, to implement actions of health education to promote care for pregnant women. So, it is useful strategy to approach the self-care, acting directly on women, through educational groups or health office to provide information and answer questions about GDM.

Therefore, the results presented in this study should enhance planning of innovative strategies for health education focused on the deficit of understanding of these women in order to perform quality assistance to promote health of the woman and fetus.

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