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GESTATIONAL DIABETES AND PRE-NATAL ASSISTANCE AT HIGH RISK

DIABETES GESTACIONAL E ASSISTÊNCIA PRÉ-NATAL NO ALTO RISCO

LA DIABETES GESTACIONAL Y LA ASISTENCIA PRENATAL DE ALTO RIESGO

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ABSTRACT

Objective: to analyze prenatal care from the number of obstetric consultations and nutrition during pregnancy and its relationship with the gestational diabetes. **Method:** this is a quantitative study of cohort analysis; with the analysis of secondary data on prenatal care in medical records related to the number of prenatal consultations and the relationship with the gestational diabetes in a public hospital of high complexity, in the year of 2013, and the results are presented in the form of tables. **Results:** it shows that 41 (23.04%) participants were less than 6 prenatal consultations with obstetrician and 148 (77.5%) were less than four nutritional consultations during the prenatal period. **Conclusion:** it was evidenced the need for improvement regarding the care of women at high risk antenatal care, in particular, when there are gaps in access to specialized services. Become important studies that show the profile of pre-natal consultations in health services for the improvement of the assistance provided, the identification of gaps in access and the development of new public health policies. **Descriptors:** Gestational Diabetes; Pregnancy; Prenatal Care; High-Risk Pregnancy; Pregnancy Complications; Women's Health.

RESUMO

Objetivo: analisar a assistência pré-natal a partir do número de consultas obstétricas e nutricionais na gestação e a relação com o diabetes gestacional. **Método:** trata-se de estudo quantitativo, de coorte analítico, com a análise de dados secundários sobre a assistência pré-natal em prontuários médicos que discorrem sobre o número de consultas do pré-natal e a relação com o diabetes gestacional em uma unidade hospitalar pública de alta complexidade, no ano de 2013 e, os resultados apresentam-se em forma de tabelas. **Resultados:** mostra-se que 41 (23,04%) participantes realizaram menos do que seis consultas de pré-natal com obstetra e 148 (77,5%) realizaram menos do que quatro consultas nutricionais no pré-natal. **Conclusão:** evidenciou-se a necessidade de melhoria quanto ao atendimento da mulher no pré-natal de alto risco, em especial, quando há lacunas no acesso aos serviços especializados. Tornam-se importantes estudos que evidenciam o perfil de consultas do pré-natal nos serviços de saúde para a melhoria da assistência prestada, a identificação das lacunas de acesso e a elaboração de novas políticas de saúde pública. **Descritores:** Diabetes Gestacional; Gravidez; Cuidado Pré-Natal; Gravidez de Alto Risco; Complicações na Gravidez; Saúde da Mulher.

RESUMEN

Objetivo: analizar la atención prenatal a partir del número de consultas obstétricas y la nutrición durante el embarazo y su relación con la diabetes gestacional. **Método:** se trata de un estudio cuantitativo de análisis de cohorte, con el análisis de datos secundarios acerca de la atención prenatal en registros médicos que están relacionados con el número de consultas prenatales y la relación con la diabetes gestacional en un hospital público de alta complejidad, en el año de 2013, y los resultados se presentan en forma de tablas. **Resultados:** la muestra que 41 (23.04%) de los participantes tenían menos de 6 consultas prenatales con el obstetra y 148 (77,5%) fueron menos de cuatro consultas nutricionales durante el período prenatal. **Conclusiones:** se evidencia la necesidad de mejora en lo que respecta a la atención de las mujeres en alto riesgo cuidados prenatales, en particular, cuando hay deficiencias en el acceso a los servicios especializados. Son importantes los estudios que demuestran el perfil de consultas prenatales en los servicios de salud para la mejora de la asistencia prestada, la identificación de brechas en el acceso y el desarrollo de nuevas políticas de salud pública. **Descriptores:** Diabetes Gestacional; Embarazo; Atención Prenatal; Embarazo de Alto Riesgo; Complicaciones del Embarazo; Salud de la Mujer.

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INTRODUCTION

It is known that the Gestational Diabetes Mellitus (GDM) is a complication of pregnancy characterized by alterations in glucose tolerance with initiation observed in pregnancy, with variable magnitude or detection along the pregnancy.

It explains that the risk factors presented by the scientific literature as predisposing factors for the occurrence of this disease are: age greater than or equal to 35 years old; previous overweight or obesity; central body fat deposition of pre-gestational age; excessive gain in the current pregnancy; hypertension or preeclampsia in the current pregnancy; family history of diabetes in first-degree relatives; obstetrical antecedents of macrosomia, fetal or neonatal death; malformations; polycystic ovary syndrome and maternal height less than 1.5 meters.¹⁻²

It is recommended by the Ministry of Health, the completion of a minimum of six visits during pre-natal, being a query in the immediate puerperium. In this way, it starts the screening for the diagnosis of gestational diabetes, already from the first consultation, with a thorough clinical history with the survey of risk factors predisposing factors, in addition to the guidance to be held before the 20th gestational week, the measurement of fasting glycemia. Indicates, by obtaining fasting glycemia ≥ 95 mg/dl and < 126 mg/dl, along with the presence of one or more risk factors, diagnosis of the disease. It is recommended that, when there are not present risk factors, the realization of the oral glucose tolerance test to confirm the diagnosis of GDM.²

It is recommended that, after the diagnosis of the GDM, referral to specialized services, such as the nutrition,³⁻⁴ aiming to achieve the recommendations of weight gain to the nutritional status by anthropometry history and, especially, to balance the metabolism of carbohydrates from individualized dietary prescription. Forward, the inability to achieve metabolic balance, the pregnant women are indicated to the medical service for the treatment of insulin therapy.⁵⁻⁹

It is noteworthy that the main consequences of the GDM are, for women, the cesarean, the development of pre-eclampsia and the risk of developing Diabetes Mellitus after childbirth; and, for the conceptus, prematurity, fetal growth excessive (macrosomia), the shoulder dystocia, hypoglycemia and perinatal death.⁷⁻¹²

It should be emphasized that, for pregnant women, living with the illness may be a factor of insecurity and emotional instability, especially when the pre-natal begins late and, consequently, the educative actions of care and changes in lifestyle are affected.⁶

OBJECTIVE

- To analyze the prenatal care from the number of obstetric consultations and nutrition during pregnancy and its relationship with the gestational diabetes.

METHOD

This is a quantitative study of cohort analysis, with analysis of secondary data on prenatal care (number of prenatal consultations) and the relationship with the gestational diabetes in a public hospital of high complexity in Niterói, Rio de Janeiro.

The collection of data in a systematized way in the medical file by consulting the records of high-risk pregnant women admitted to the maternity unit. It appears that the two phases of data collection occurred between December 2015 and March 2016, there were: the survey of medical records of women appearing in the book of obstetric procedures of maternity unit, in the year 2013, and the revision and the collection of data in the medical file by consulting the records selected.

They settled on the following inclusion criteria: having been admitted to the maternity leave between 1st January 2013 and 31st December of the same year for childbirth and have performed at least one prenatal care at the outpatient clinic of obstetrics unit. Be assured, as the survey was performed by the collection of secondary data, the confidentiality of participants with the use of the letter E (Interview) followed by Arabic number (1 to 178), replacing the names of pregnant women included in the study.

The study was submitted to the Committee for Ethics in Research of HUAP/UFF, as provided for in Resolution 466/12 of the National Health Council, being approved under the opinion N 1,354.164/2015, having the CAAE N 48561315.8.0000.5243.

It started the collection of data with a review of 730 medical records of women who underwent obstetric procedures in maternity, in the year of 2013.

There were 84 (11.5%) disqualified because they are records of women who underwent several obstetric procedures (manual vacuum aspiration, uterine curettage, among other different procedures of delivery)

identified in the Book of Obstetric Procedures of the Unit.

Disqualified 441 (60.4%) medical records belonging to pregnant women who received prenatal care in other units and who had performed only the birth in maternity hospital unit studied and, in this way, did not meet the inclusion criteria of the study; 27 were excluded (3.7%) records by not being available in the data collection period. Thus selected, 178 (24.4%) records that met the criteria for inclusion in the study.

It was used for data collection, a structured form, developed by the authors, containing the following questions: age; gestational age at the first prenatal care visit; number of consultations with the obstetrician in prenatal care; number of consultations with a nutritionist in the pre-natal; pre-gestational weight; Body Height; previous obstetric complications and diagnosis of gestational diabetes. It is considered for the diagnosis of gestational diabetes, the criteria recommended by the Brazilian Society of Diabetes¹ where it is considered the diagnosis

when the fasting blood glucose reaches ≥ 92 mg/dl and < 126 mg/dl. You must perform the diagnosis when the fasting blood glucose is < 92 mg/dl, by means of Oral Glucose Tolerance Test (OGTT), where the abnormality, in one of the points of measurement, it is indicative of gestational diabetes. Each patient was evaluated as to the above-mentioned tasks.

Stored information collected in the database of the software Statistical Package for Social Science (SPSS) for Windows, version 20.0, analyzing them by means of descriptive statistics: absolute and relative frequency. We evaluated the correlation by using the chi-square test ($p < 0.05$).

RESULTS

It was identified in the analysis of secondary data relating to social data and the history of medical consultations and nutritional in pre-natal care, that the average age of participants was 27.7 years old (SD = 7.2 years), in compliance with the minimum age of 12 and maximum of 47 years old.

Table 1. Maternal characteristics and prenatal consultations in the history of women met in a public hospital. Niteroi (RJ), Brazil, 2016.

	Average	SD
Maternal age (in years old)	27,7	7,2
Number of queries with nutritionist	1,9	2,3
Number of queries with obstetrician	8,1	3,4

Categorized the number of consultations with the obstetrician and with the nutritionist, carried out by study participants

during the pre-natal care, in accordance with Ministry of Health recommendations.

Table 2. Categories of women, according to the Ministry of Health's recommendations for obstetric and nutritional consultations in pre-natal, met in a public hospital. Niteroi (RJ), Brazil, 2016.

Categories	n	%
Number of queries with the obstetrician		
<6 queries	41	23,04
≥ 6 queries	137	76,96
Total	178	100
Number of queries with the nutritionist		
<4 queries	148	77,5
≥ 4 queries	40	22,5
Total	178	100

Present themselves, in Table 3, the distribution of pregnant women in accordance with the diagnosis of DMG in the current pregnancy and the number of pre-natal consultations with the doctor obstetrician,

and with the professionals of the multidisciplinary team: a nutritionist. Details the analysis showed no significant relationship between the number of prenatal consultations and diagnosis of diabetes ($p > 0.05$).

Table 3. Distribution of number consultations in accordance with the prenatal diagnosis of gestational diabetes in women attended prenatal in a hospital unit in public. Niteroi (RJ), Brazil, 2016.

	Average	SD	N	p
N consultations with the obstetrician				0,072
Missing DMG	7,9	3,3	153	
Present DMG	9,2	3,9	25	
Total			178	
N consultation with the nutritionist				0,133
Missing DMG	1,8	2,3	153	
Present DMG	2,3	2,3	24	
Total			178	

DISCUSSION

It is recognized that the number of consultations in prenatal care is an indicator of quality of care to women’s health and, in particular, of the pregnant women.² It is recommended by the Ministry of Health, the minimum of six consultations with the obstetrician during the prenatal and immediate puerperium. It was demonstrated, in this study, which, in spite of it being carried out in a unit of high complexity, it is still a great number of women who do not achieve the minimum consultation practices for obtaining a health care considered quality and that is conducive to the prevention or control of complications in pregnancy.

It is expected, moreover, that a high quality prenatal care greatly by the intervention of other professionals for the monitoring and control of possible inadequacies and weight. Become important, in this way, both the number of consultations with the obstetrician, as the recommendation of consultations with nutritionists and nurses,^{2-3,6} for a pre-natal with quality of access and comprehensiveness of services rendered. It was demonstrated, in this study; however, that less than a quarter of pregnant women held the recommendation of at least four consultations with a nutritionist during the prenatal period. It appears, thus, that the provision of a high quality prenatal and with the participation of the multiprofessional team is still far from ideal.

It is pointed in the literature, that the number of consultation practices in the pre-natal, Brazil, is already considered below the recommended procedure in developed countries.

It is; however, that other factors may contribute to the quality of prenatal care provided, such as the early monitoring, the realization of technical procedures and routine examinations of prenatal care.⁹

It is evident, in the literature that pregnant women who begin shortly the early prenatal consultations held over the course of

pregnancy, despite the need for improvement of health education actions.¹⁰

It is suggested, in relation to the monitoring nutritional status in pregnancy, that this study contributes in a preventive manner, with subsequent improvement in the health of the woman, the concept, and also points out that monitoring as a strategy of low cost and that provides a better conviviality when the disease is already established.^{6,11-3}

It emphasizes the gestational diabetes as one of the comorbidities usually more evident among pregnant women, especially those with inadequate weight gain during pregnancy. Alerts you if, according to the guidelines of the Brazilian Society of Diabetes, that the GDM can occur in 1% to 14% of all pregnancies, depending on the population studied, associating it with higher morbidity and perinatal mortality, even though it has not found a significant correlation between the number of prenatal consultations and the diagnosis of gestational diabetes. You can lead; however, to perform prenatal consultations with less than the recommended, higher maternal and fetal morbidity and mortality.¹⁴

It explains that, as this study was conducted in a health unit of high complexity, that it is unsatisfactory that the pregnant women referenced have obtained less queries and access to prenatal care than recommended, although it is important to observe that the inefficiency of access and comprehensiveness it may also be related to the difficulties in the care of the health network, in particular, in the basic units of care.

It presents and it is confirmed, as well, in the case of a unit of high complexity, quaternary, which contemplates the fulfillment of all the pregnant women from the primary health network of municipalities that comprise the Metropolitan Region II of the state of Rio de Janeiro, with the results obtained, the fragility of the health care network in these municipalities and not only

in the city of Niterói, where is located the hospital unit.

CONCLUSION

It was evidenced the need for improvement regarding the treatment of women in relation to high risk antenatal care in particular, when there are gaps in access to specialized services. Become important studies that show the profile of pre-natal consultations of health services for the improvement of the assistance provided, the identification of gaps in access and the development of new public health policies.

It is suggested that, in the assistance provided to women in the gestational period, the incentive for completion of pre-natal and awareness of health teams can collaborate to the awareness of patients. It should be emphasized that the actions of awareness and education in health, performed by health professionals, may be strategies that foster the knowledge and self-care. Signals, moreover, that the adequate monitoring of pregnant women, with consultation of the multiprofessional team, may contribute to the control of weight gain and metabolic and join a possible reduction in the number of new cases of gestational comorbidities such as diabetes.

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Guerra JVV, Alves VH, Valete COS et al.

Gestational diabetes and pre-natal assistance...

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