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Abstract 572 Comparison of Urinary Incontinence between Pregnant Women at Habitual Risk and Pregnant Women with Diabetes

Adriana Gomes Magalhães1, Kaísa Thomaz Cavalcante e Silva2, Luzinete Medeiros de Almeida3, Vanessa Patricia Soares de Sousa4,Priscila Acsa da Silva Estevam5, Rauany Barrêto Feitoza6, Grasiéla Nascimento Correia7, Maria Thereza Albuquerque Barbosa Cabral Micussi8

1. Federal University of Rio Grande do Norte-Brazil, 2. University of Patos- Brazil, 3. Brazilian Hospital Services Company

ABSTRACT

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INTRODUCTION

Gestational diabetes mellitus (GDM) is an endocrinopathy that begins or is diagnosed during pregnancy, characterized by carbohydrate intolerance, resulting in increased glycemic levels. The risk of developing GDM is common to all women, but some factors can increase its occurrence, such as advanced maternal age, short stature, multiparity, excessive weight gain, family history of diabetes, previous history of GDM and presence of syndromes. hypertension in the current pregnancy [1].

Diabetes is responsible for a series of changes in the body, which can affect the most varied tissues and organs, being able to generate influences on the pelvic floor muscles. Thus, the objective of this study is to compare the presence of UI in pregnant women at usual risk and pregnant women diagnosed with GDM.

METHODS AND MATERIALS

Cross-sectional, observational study with an analytical quantitative approach, approved by the Research Ethics Committee, under number [2.813.379]. Held between November and December 2018, in the health services of a municipality. 24 pregnant women participated, after signing the Free and Informed Consent Term (FICT), 12 in each group, pregnant women at usual risk and pregnant women with GDM, considering the sample calculation performed by the OpenEpi program, Version 3 available on the website (http: //www.openepi.com), using 95% confidence interval, 80% power, sample size ratio from group 2 to group 1.

The inclusion criteria were: pregnant women with a single fetus, aged between 18 and 35 years, from the second trimester onwards, sexually active, intact amniotic membranes, no previous pelvic surgery and no threat of premature delivery; In addition, pregnant women with GDM needed to be stable in terms of glycemic control (fasting less than 95 mg/dL, one hour after a meal less than 140 mg/dL, or two hours after a meal below 120 mg/dL). The exclusion criteria were pregnant women with any obstetric complications during the research or those who refused/withdrew from participating in it.

Data were collected from a questionnaire designed for the research (sociodemographic, anthropometric, gestational data and clinical history) and the International Consultation on Incontinence Questionnare (ICIQ-SF), translated and validated into Brazilian Portuguese in 2004. questionnaire capable of evaluating the impact of urinary incontinence on women's quality of life. The general score is obtained by adding items 3, 4 and 5, and the higher the score, the greater the impact on quality of life. Score 0 means no impact, 1 to 3 mild impact, 4 to 6 moderate impact, 7 to 9 severe impact and 10 or more very severe impact.
Data analysis was performed using the Statistical Package for the Social Science (SPSS) version 20.0 software. Data normality was verified by the Kolmogorov-Smirnov test, sample characterization was performed using descriptive statistics and the results were presented as median and interquartile difference, the comparison between groups for urinary continence data were analyzed using the Mann-Whitney test and the chi-square test was used to verify the association between the categorical variables. p ≤0.05 was adopted for statistically significant results.

RESULTS

In the present study, it was observed that pregnant women at usual risk had a median age of 22.5 years and an interquartile difference (ID) = 9.75, most were in a stable relationship (58.3%), had up to 12 years of schooling (66.7%), were obese (50%) and 83.3% did not practice physical activity. The participants who were diagnosed with GDM had a median age of 31.5 years (DI= 6), 91.7% were in a stable relationship, had up to 12 years of schooling (58.3%), was obese (50%) and 75.0% did not practice physical activity. There was a significant difference between the groups regarding age (p= 0.01) (Table 1).

When the impact of UI on the quality of life of pregnant women was evaluated by the ICIQ-SF, it was observed that the median of the general scores for the group of pregnant women at usual risk was 0 (DI= 6), while for the group of pregnant women with GDM was 1.50 (ID=10), which means no impact on quality of life for the usual risk group and a slight impact for the group with GDM, however, with no statistically significant difference between the groups (p=0.38).

Regarding the questions addressed by the ICIQ-SF, it was found that the frequency of urinary leakage was reported by 50% of pregnant women with GDM and by 32.3% of women at usual risk. Regarding the amount of urinary loss, the pregnant women in both groups who presented this situation, reported that this loss was in small amounts (33%), and that it happened mainly in situations of effort, such as coughing or sneezing.

Table 1. Sample characterization.

Characteristics	Usual risk group (n=12)	Group with GDM (n=12)
Age, median (ID)	22,5 (9,75)	31,5 (6)
Nº of pregnancies, median (DI)	2 (1,75)	2,5 (1)
Gestational age, median (ID)	30,6 (16,1)	25 (13,5)
Marital status (%)		
Stable Union	7 (58,3)	11 (91,7)
Single	5 (41,7)	1 (8,3)
Education (%)		
Up to 5 years	0 (0)	1 (8,3)
Up to 9 years	4 (33,3)	4 (33,3)
Up to 12 years old	8 (66,7)	7 (58,3)
body mass index (BMI) (%)		
Normal Range	2 (16,7)	2 (16,7)
Overweight)	4 (33,3)	4 (33,3)
Obesity	6 (50)	6 (50)
Types of delivery (%)		
Vaginal	9 (75)	8 (66,7)
Instrumental	0 (0)	1 (8,3)
Surgical	3 (25)	3 (25)
Physical activity (%)		
Yes	2 (16,7)	3 (25)
No	10 (83,3)	9 (75)
Urinary infection (%)		
Yes	4 (33,3)	3 (25)
No	8 (66,7)	9 (75)
Comorbidities (%)		
Yes	1 (8,3)	3 (25)
No	11 (91,7)	9 (75)
Participation in a group of pregnant women (%)		
Yes	4 (33,3)	3 (25)
No	8 (66,7)	9 (75)

*n= number of research participants; DI= interquartile difference; GDM = Gestational Diabetes Mellitus

DISCUSSION

In the present study, a higher frequency of older women was observed in the group of pregnant women with GDM (p=0.01), corroborating the findings in the literature that report that maternal age is an already established risk factor for both the development of GDM and stress urinary incontinence during pregnancy (1,2). As for the complaint of urinary loss, there was no association (p=0.26) between pregnant women with GDM and pregnant women at usual risk. It was also observed that there was no significant difference (p=0.38) in the general score of the ICIQ-SF, with medians of 1.5 (DI=10) and 0 (DI=6), respectively, this means a slight impact on the quality of life of pregnant women with GDM and no impact on pregnant women at usual risk.

In this sense, a literature review carried out brought GDM as one of the risk factors for the development of UI in women, thus supporting what was found in this research.This influence could possibly be due to excessive weight gain and fetal macrosomia, which would increase PFM pressure, in addition to hyperglycemia, which can cause polyuria. All these factors could increase the chance of developing UI, but none of them is shown to be an exact mechanism [2]. Other factors mentioned in the literature are obesity and low physical activity, supporting the findings of this study, where most pregnant women in both groups were classified as obese and claimed not to practice physical activity. However, despite the high prevalence, no direct associations were found between these factors and the development of UI [3].

CONCLUSIONS

The present study identified a frequency of urinary loss complaints, with a slight impact on quality of life, it is a study with a small sample size, which makes a more robust statistical analysis and extrapolation of the results found here impossible.

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