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COMPLICATIONS AND PRE-EXISTING DISEASES IN PREGNANT WOMEN WITH DIABETES MELLITUS

COMPLICAÇÕES E DOENÇAS PRÉ-EXISTENTES EM GESTANTES COM DIABETES MELLITUS

COMPLICACIONES Y ENFERMEDADES PREEXISTENTES EN MUJERES EMBARAZADAS CON DIABETES MELLITUS

Isadora Salani de Queiroz[1], Daniela Comelis Bertolin[2], Alexandre Lins Werneck[3]

ABSTRACT

Objective: to describe the main complications and preexisting diseases in pregnant women with Gestational Diabetes Mellitus. ***Method:*** this is a quantitative, analytical, cross-sectional study. The study sample was composed of 591 records of pregnant women, 47 of whom had GDM and 544 without GDM. Data were collected in medical records of a hospital and maternity hospital. An instrument was used to collect patient data. The data were analyzed by means of descriptive statistics in their predominance and the results were presented in the form of tables. ***Results:*** 47 charts of pregnant women with Gestational Diabetes Mellitus were selected. It was shown that 38.71% had arterial hypertension as an existing disease and 10.07% had lower belly pain as the main complication. ***Conclusion:*** it was observed that the main complications in the sample of pregnant women with Gestational Diabetes Mellitus are low belly pain, pregnancy-specific hypertensive disease, leukorrhea, headache, urinary tract infection and dyspnea; in relation to existing diseases, arterial hypertension was the most prevalent disease in pregnant women even before pregnancy, followed by smoking, hypothyroidism, asthma and hepatitis C. ***Descriptors:*** Gestational Diabetes; Diseases; High Risk Pregnancy; Pregnant women; Pregnancy Complications; Nursing; Diabetes Mellitus.

RESUMO:

Objetivo*:** descrever as principais complicações e doenças pré-existentes em gestantes com Diabetes Mellitus Gestacional. ***Método*:** trata-se de estudo quantitativo, analítico, transversal. Compôs-se a amostra do estudo por 591 prontuários de gestantes, sendo 47 com DMG e 544 sem DMG. Realizou-se a coleta de dados em prontuários de um hospital e maternidade. Utilizou-se um instrumento para a coleta dos dados das pacientes. Analisaram-se os dados por meio de estatística descritiva em sua predominância e apresentaram-se os resultados em forma de tabelas. ***Resultados*:** selecionaram-se 47 prontuários de gestantes com Diabetes Mellitus Gestacional. Mostrou-se, que 38,71% tinham hipertensão arterial como doença já existente e 10,07% tinham dor em baixo ventre como principal complicação. ***Conclusão: observou-se que as principais complicações na amostra de gestantes com Diabetes Mellitus Gestacional são dor em baixo ventre, doença hipertensiva específica da gravidez, leucorreia, cefaleia, infecção do trato urinário e dispneia; em relação às doenças já existentes, a hipertensão arterial foi a doença que mais prevaleceu nas gestantes antes mesmo da gestação, seguida de tabagismo, hipotireoidismo, asma e hepatite C. ***Descritores*:** Diabetes Gestacional; Doenças; Gravidez de Alto Risco; Gestantes; Complicações na Gravidez; Enfermagem; Diabetes Mellitus.

RESUMEN

Objetivo: describir las principales complicaciones y enfermedades preexistentes en mujeres embarazadas con Diabetes Mellitus Gestacional. ***Método:*** se trata de un estudio cuantitativo, analítico, transversal. Se compuso la muestra del estudio por 591 prontuarios de gestantes, siendo 47 con DMG y 544 sin DMG. Se realizó la recolección de datos en prontuarios de un hospital y maternidad. Se utilizó un instrumento para la recolección de los datos de las pacientes. Se analizaron los datos por medio de estadística descriptiva en su predominancia y se presentaron los resultados en forma de tablas. ***Resultados:*** se seleccionaron 47 prontuarios de gestantes con Diabetes Mellitus Gestacional. Se mostró, que el 38,71% tenía hipertensión arterial como enfermedad ya existente y el 10,07% tenían dolor en el vientre como principal complicación. ***Conclusión:*** se observó que las principales complicaciones en la muestra de gestantes con Diabetes Mellitus Gestacional son dolor en bajo vientre, enfermedad hipertensiva específica del embarazo, leucorrea, cefalea, infección del tracto urinario y disnea; en relación a las enfermedades ya existentes, la hipertensión arterial fue la enfermedad que más prevaleció en las gestantes antes de la gestación, seguida de tabaquismo, hipotiroidismo, asma y hepatitis C. ***Descriptores*:** Diabetes Gestacional; Embarazo de Alto Riesgo; Mujeres Embarazadas; Complicaciones del Embarazo; Nursing; Diabetes Mellitus.

[1]Masters student, São José do Rio Preto Medical School/ FAMERP. São José do Rio Preto (SP), Brazil. Email: isadorasalaniq@gmail.com ORCID iD: https://orcid.org/0000-0002-1255-6685; [2,3]PhDs, São José do Rio Preto Medical School/ FAMERP. São José do Rio Preto (SP), Brazil. Email: danielacomelisbertolin@gmail.com ORCID iD: https://orcid.org/0000-0001-9272-2817. Email: alexandre.werneck@famerp.br ORCID iD: http://orcid.org/0000-0002-2911-8091

INTRODUCTION

Approximately 415 million adults with diabetes mellitus (DM) worldwide are currently known, and 318 million adults have glucose intolerance, with a high risk of developing the disease in the future. It can be said that the proportion of deaths is slightly higher in women than in men, and that the main risk factor for the development of Type 2 Diabetes Mellitus (T2DM) and metabolic syndrome is the obstetric history of Gestational Diabetes Mellitus (GDM). It is worth noting that the cost of DM disease, in the majority of the world, varies between 5.00% and 20.00% of global health expenditure. Hyperglycemia is thus constituted during gestation and after a considerable problem nowadays. The diagnosis of GDM should be considered a world health priority, since the objective is to reduce the prevalence of these metabolic disorders.[1]

High-risk pregnancies are considered to be a major public health problem because, according to the high rates of perinatal morbidity (45.00%), there is an increase in the incidence of high-risk pregnancies among 20.00 to 30.00%.[2] Gestation is considered a physiological phenomenon that usually progresses without intercurrences. In some cases, however, it can be seen that it may be unfavorable for both maternal health and fetal health, and this type of pregnancy can be termed as high risk.

It is known that GDM is one of the diseases related to the increase of maternal and perinatal morbidity and mortality, being considered the most common metabolic problem in pregnancy and its prevalence can range from 1.00 to 14.00%, and in other studies with the Brazilian population, there were prevalence of GDM ranging from 2.90 to 6.60%.[3]

It is understood that it is important to detect, as soon as possible, the profile of this high-risk pregnant woman and identify the difficulties that favor the increased risk of gestation and its social consequences, providing a better efficacy in the development of public policies and actions that can reduce high rates of high-risk pregnancies and perinatal mortality.[4]

It is understood that maternal death is due to unsuccessful events, affecting pregnant women and / or puerperal women without care, family and / or social support, or inadequate response from health services. It is warned that the flow of patients has to be done correctly, that is, perform referral according to the complaints and symptoms for the establishment of adequate health, not aggravating the emergency and obstetric emergencies.[5]

In order to provide adequate care, health professionals should be trained, regardless of whether they work in the basic care network or even the most complex level of care, in order to identify risks and attend to these pregnant women as soon as possible.[5] It can be said that the poorly performed interventions during the hospitalization process reflect the lack of responsibility and commitment of the professionals for the care already performed in prenatal care.[6]

It is a notion that the pregnant woman facing chronic illness is considered to be a high-risk pregnant woman and, therefore, may find obstacles to the appropriate adjustment in relation to the emotional aspects of this new experience, in other words, situations such as fear of their own health and that of the baby, changes in the body, the baby being born with some anomaly, being able to lose control of itself.[7]

It can be said that, in relation to maternal death, it is a destructive phase for both the family and the community, but it represents only part of the health problems that usually occur during the gestational period and during childbirth. It is always necessary to innovate when it comes to women's health, in order to reduce maternal morbidity.[8]

It is reported that infant mortality has declined significantly throughout the world. It is inferred that in 1990, in Brazil, for example, it fell from 51 deaths / 1,000 live births to 15 deaths / 1,000 in 2015. However, even in the light of these advances, the infant mortality rate in the Brazil is 19.88 deaths per thousand live births, higher than in Cuba (5.25), Chile (6.48), Argentina (12.80), China (15.40) and Mexico (16.50).[9]

It is noteworthy that the number of pregnancies is increasing in women with advanced age (late pregnancies), that is, women who become pregnant after 34 years of age. It is possible to be said that, in Brazil, the birth rate is decreasing and, coincidentally, there is a noticeable increase in the number of live births in women with 35 years or more. According to data from the Live Birth Information System (SINASC), in 2000, of the total number of live births, 8.60% came from late pregnancies, and in 2014 this number increased to 12.20%. This increase in the number of pregnancies, according to some studies, is due to women's desire to invest in training and professional careers. They are, moreover, easy access to contraceptive

methods, advances in assisted reproductive technology and advances in health care causes for this situation.[10]

OBJECTIVE

- To describe the main complications and preexisting diseases in pregnant women with Gestational Diabetes Mellitus.

METHOD

A cross-sectional study was conducted with a correlation between variables, with a quantitative approach and an analytical design, by analyzing medical records at the Hospital of the Child and Maternity Hospital of São José do Rio Preto from August 2014 to July 2016.

There were 1,532 entries. Of these, 17 were excluded due to incorrect data in the pregnant women's book, and it was not possible to access the medical record. 924 medical records were also excluded due to the lack of pertinent information, that is, the fields were not adequately filled. The sample of the study was composed of 591 records of pregnant women, 47 of them with GDM and 544 without GDM, enrolled in the book of high-risk pregnant women from the SMA (Specialist Medical Ambulatory), from August 2014 to July 2016.

Data was collected from October 2016 to February 2017, performed in the SMA, through the pregnant women's notebook, in which the pregnant women's name and the attendance number were noted. Then, the number of care provided in the pregnant women's notebook in the HCM database was inserted, which allowed access to the patient's chart.

As an inclusion criterion, all pregnant women enrolled in the period from August 2014 to July 2016 were included. Data was not included in the pregnant women's book and in the medical records. The research instrument was created by the researcher containing sociodemographic, obstetric, complications, medicines used and existing diseases. The following variables were considered: age, ethnicity, GDM, complications, number of birth, history of DM, number of abortions, BMI value, diet, tests performed, glycemic control, TOTG value, medicines used, profession, marital status and diseases already existing in pregnant women. However, the following variables remained: age, ethnicity, GDM, complications, number of births, number of abortions, medications used, profession, marital status and diseases already in existence in pregnant women.

Descriptive statistics methods were used in their predominance, although, at times, inferential methods were used, analyzing the question of probability within the sample studied. The following calculations were used in some moments: mean, fashion, variance, chi-square test and Student t test. It was concluded, after analyzing the data, which, in an objective and descriptive way, the researcher chose to evaluate only the women who had GDM, since the disease is one of the main complications that affect women in the gestational period.

RESULTS

The sociodemographic characteristics of the sample of 591 pregnant women were described, of which 47 were selected with GDM for this study, according to table 1.

Table 1. Socio-demographic data on pregnant women with GDM. São José do Rio Preto (SP), Brazil, 2018.

Sociodemographic data	Pregnant women with GDM	
	N	%
Age		
21 to 25 years	10	21.28
26 to 30 years	7	14.89
31 to 35 years	14	29.79
36 to 40 years	12	25.53
41 to 45 years	2	4.26
Missing	2	4.26
Ethnicity		
White	35	74.47
Black	6	12.77
Brown	5	10.64
Missing	1	2.13
Marital status		
Single	7	14.89
Married	24	51.06
Stable union	14	29.79
Divorced	2	4.26
Profession		
Housewife	24	51.06
External work	18	38.30
Missing	5	10.64
Total	**47**	**100.00**

Table 2 shows the obstetric data.

Table 2. Obstetric data in pregnant women with GDM. São José do Rio Preto (SP), Brazil, 2018.

Clinical Data	Pregnant women with GDM	
	N	%
N of childbirths		
0 childbirths	16	34.04
1 childbirth	16	34.04
2 childbirths	10	21.28
3 childbirths	5	10.64
N of abortions		
0 abortions	34	72.34
1 abortion	7	14.89
2 abortions	4	8.51
3 abortions	2	4.26
Total	**47**	**100.00**

The variable "pain in the lower abdomen" was highlighted, with a prevalence of 10.07%, among the several complications that affect the pregnant women with GDM mentioned in table 3. It should be emphasized that GDM was not considered the main complication, which all the pregnant women in the sample had.

Table 3. Complications and events in pregnant women with GDM. São José do Rio Preto (SP), Brazil, 2018.

Complications and events	Pregnant women with GDM	
	N	%
Pain in the belly	14	10.07
Specific Hypertensive Disease	6	4.32
Contractions	4	2.87
Headache	5	3.60
Twins	1	0.72
Hypertensive Peak	3	2.16
Lower back	3	2.16
Leukorrhea	6	4.32
Urinary tract infection	5	3.60
Obesity	2	1.44
Bleeding	1	0.72
Vomit	1	0.72
Repetition Abortion	2	1.44
Dyspnea	5	3.60
Polydamnium	1	0.72
Oligohydramnios	4	2.87
Pre eclampsia	2	1.44
Rota Bag	1	0.72
Gestational Diabetes Mellitus	47	33.81
Others	26	18.70
Total	**139**	**100.00**

Table 4 shows the existing diseases.

Table 4. Existing diseases in pregnant women with GDM. São José do Rio Preto (SP), Brazil, 2018.

Existing diseases	Pregnant women with GDM	
	N	%
Arterial hypertension	12	38.71
Smoking	5	16.14
Hypothyroidism	2	6.45
Asthma	2	6.45
Depression	1	3.22
Drug addict	1	3.22
Hepatitis C	2	6.45
Others	1	3.22
Without information	5	16.14
Total	**31**	**100.00**

DISCUSSION

It was identified that the characterization of high-risk pregnant women contributed to the identification of epidemiological factors and to a control and prevention of complications, aimed at reducing maternal and infant mortality.[2]

It can be observed, in a study carried out in a public maternity hospital in Fortaleza between 2012 and 2013, with 50 pregnant women with GDM, that arterial hypertension (18.00%) was a disease that pregnant women already had. The pregnant women were predominantly brown (52.00%), the mean age was 31.34 years, with the minimum age being 18 years and the maximum of 46 years; of these, 22.00% were over 37 years old, 86.00% performed external work and 86.00% had a partner.[11] It was observed, in this study, that 47 pregnant women with gestational diabetes in a maternity hospital in the State of São Paulo showed that hypertension predominated as an existing disease, affecting 38.71% of the pregnant women, and there were also the predominance of color pregnant women (74.47%), with a mean age of 30.3 years, with a minimum age of 21 years and a maximum of 45 years; of these, 29.79% were 31 to 35 years old, 51.06% were from the home, 51.06% were married and 29.79% were in a consensual union.

It was reported in a hospital located in Fortaleza, CE, in a study with 17 pregnant women with GDM, between August and October 2011 that the predominant age group was between 30 and 34 years old (41.20%). A significant number of pregnancies were reported in the age group of 35 to 39 years (39.40%) and 40 to 45 years (23.50%), 88.22% were married or were in a consensual union.[12] It can be said that, in this study, the age

groups were 36 to 40 years (25.53%) and 41 to 45 years (4.26%).

It was found that the main complications of pregnant women with GMD were DM2 (50%), spontaneous abortion (38.80%), hypertension (27.70%), infections and preterm births (16.60%).[13] In this study, low belly pain (10.07%), pregnancy-specific hypertensive disease (4.32%), leukorrhea (4.32%), headache (3.60%), urinary tract infection (3.60%) and dyspnea (3.60%).

Hypertensive syndromes, mainly preeclampsia, related to insulin resistance and glucose intolerance for women, who are among the main ones, have been associated with complications. It can be emphasized that complications of GDM lead to another notable complication, such as the increase in the number of cesarean deliveries which, in turn, increases the chances of complications arising from surgery, such as hemorrhages and puerperal infections. It is also noticed that, in addition, the pregnant woman with GDM has between 35% and 60% chances of developing diabetes in the next 20-20 years.[14]

CONCLUSION

It was observed that the main complications in the sample of pregnant women with GDM are lower belly pain, pregnancy-specific hypertensive disease, leukorrhea, headache, urinary tract infection and dyspnea. It was observed that, in relation to existing diseases, arterial hypertension was the most prevalent disease in pregnant women before pregnancy, followed by smoking, hypothyroidism, asthma and hepatitis C.

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Corresponding Address

Isadora Salani de Queiroz
Avenida dos Arnaldos, 219
Bairro Santa Helena
CEP: 15600-000 — Fernandópolis (SP), Brazil