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PROFILE OF OBESE PREGNANT WOMEN: HIGH RISK

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ABSTRACT

Objective: to outline the profile of obese pregnant women attended at a High Gestational Risk Clinic. **Method:** a retrospective study with a quantitative approach that seeks to describe the profile of the 332 pregnant women diagnosed with obesity attended at the High Gestational Risk Outpatient Clinic, through the documentary assessment of health indicators collected in the high-risk nursing consultation. **Results:** the study allowed to identify the profile of obese pregnant women in the third health region, as well as the pathologies associated to obesity during pregnancy. **Conclusion:** it is concluded that the high-risk consultations provided the opportunity to discover epidemiological indicators associated to obesity during pregnancy, favoring the improvement of prenatal activities as well as the quality of life of pregnant women, in addition to reducing maternal and perinatal morbidity and mortality.

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INTRODUCTION

Obesity is characterized as a chronic and multifactorial metabolic syndrome resulting from a lack of control between food and caloric expenditure, which leads to an increase in the quantity and size of fat cells, producing several changes in the functioning of the organism (SILVA et al., 2014). Therefore, the way used to diagnose excess weight and the classification of the degree of obesity is the body mass index (BMI). According to Brazilian guidelines, the diagnosis of obesity is confirmed by a BMI≥30.0 kg/m^2, being divided into three classes: obesity grade I (from 30.0–34.9 kg/m^2), obesity grade II (35, 0–39.9 kg/m^2) and severe obesity (≥40 kg/^{m2}) (ABESO, 2016). Regarding to weight gain during pregnancy, this results mainly from the products of conception (amniotic fluid, placenta and fetus) and the gain of maternal tissues (increased volume of blood, breasts, adipose tissue and uterus), however, mismatch in weight gain is seen as a risk factor, being more evident in the last two quarters, due to hormonal changes, reduced physical activity and inadequate diet (OLIVEIRA; GRACILIANO, 2015).

It is noteworthy that the BMI for the initial diagnosis of obesity in pregnant women is the pre-gestational BMI of two months prior to pregnancy or the BMI calculated up to the 13th gestational week. This calculation per gestational week allows nutritional diagnosis at any period of pregnancy, facilitating the identification of pregnant women at nutritional risk (SESA, 2018). During pregnancy, it should be also researched diseases related to nutrition such as Gestational Diabetes Mellitus and Specific Hypertensive Disease of Pregnancy, as they are associated to pre-pregnancy BMI and weight gain during pregnancy, verifying that the risk for these two problems is 2 to 6 times more frequent in overweight pregnant women (OLIVEIRA; GRACILIANO, 2015). This study is justified by the high incidence of women with excessive weight gain during pregnancy, since, by the Linha Linha Rede Mãe Paranaense, these women are stratified as high risk, that is, more subject to complications during pregnancy and childbirth, requiring a specialized service with multidisciplinary teams, who are familiar with high-risk pregnancies (SESA, 2018).

In this sense, obesity has become the object of research in the field of public health policies, where the implementation of the National Food and Nutrition Policy has brought several actions for the control, treatment and prevention of obesity (CASTRO, 2017). Still referring to public policies, in Brazil, the National System of Food and Nutritional Security was established, the care line for obesity as part of the Health Care Network for People with Chronic Diseases, the "Academia de Saúde" Program as well as the National Plan Food and Nutritional Security that seeks to contain the increase in obesity in the population (CASTRO, 2017); (DIAS, ANGELS, BURLANDY, 2017). Therefore, this study aimed at outlining the profile of obese pregnant women attended at a High Gestational Risk Clinic.

METHODS

This is a retrospective study with a quantitative approach, in which health indicators of obese pregnant women from 11 towns in the region of Campos Gerais, which represents the 3rd regional health region of Paraná, attended at the High Gestational Risk Clinic, were analyzed. The inclusion criteria in the study were pregnant women with obesity who received care at the Outpatient Clinic of High Gestational Risk; and the exclusion criteria were pregnant women attended at the same service, but with another pregnancy risk that did not include obesity. The database comprised the period from January 2017 to December 2018, totaling 588 pregnant women attended in that period. Through health indicators, 332 pregnant women with a diagnosis of obesity were selected. During the selection of the data, among the months of August to December 2019, the following variables were listed: town of origin, gestational quarter, weight, BMI, comorbidities associated to obesity, weight range and degree of obesity. The data were tabulated and organized in Microsoft Excel spreadsheets, using descriptive statistics with frequency analysis to verify the general characteristics of the sample and the different risks. Statistical Package for Social Sciences (SPSS), version 25, was used for data analysis. The project was approved under opinion number 1,055,927 issued by the Research Ethics Committee of the State University of Ponta Grossa. The study complied with national and international standards of ethics in research involving human beings.

RESULTS

Following is the profile of pregnant women diagnosed with obesity, regarding to their origin: 128 (38.6%) are from Castro, 38 (11.4%) from Carambeí, 31 (9.3%) from Piraí do Sul, 30 (9 %) from Palmeira, 29 (8.7%) from Jaguaraíva, 24 (7.2%) are from Arapoti and 52 (15.6%) belong to the other towns of the third health region - Ipiranga, Ivaí, Port of Amazonas , São João do Triunfo and Sengés. Regarding to outpatient monitoring of high gestational risk, 37 pregnant women (11.1%) started in the first gestational trimester, 120 (36.1%) in the second gestational trimester, 173 (52.1%) in the third gestational trimester. The average weight of these pregnant women was 100 kg and the average BMI was 39.19. According to the weight range 127 (38.3%) pregnant women from 82.01 kg to 99.00 kg, 120 (36.1%) pregnant women from 99.01 kg to 116.00 kg, 47 (14.2%) pregnant women from 116.01 kg to 133.00 kg and 7 (2.1%) pregnant women from 133.01 kg to 150.00 kg. According to the degree of obesity: 64 (19.3%) pregnant women were classified as class I obesity, 127 (38.3%) class II obesity and 141 (42.5%) of severe obesity. Regarding to the frequency of comorbidities associated to obesity 42 (12.7%) pregnant women did not have associated comorbidities, 166 (50.0%) pregnant women have a comorbidity associated to obesity and 83 (25.0%) pregnant women have two comorbidities associated to obesity. According to the proportion of comorbidities by the number of obese women (N = 332): 155 (46.7%) pregnant women had chronic arterial hypertension, 75 (22.6%) pregnant women have thyroid disorders, 45 (13.6%) pregnant women are smokers, 27 (8.1%) pregnant women have mental disorders, 27 (8.1%) pregnant women have lung diseases, 25 (7.5%) pregnant women are diagnosed with gestational diabetes mellitus, 23 (6.9%) pregnant women have Rh negative, 16 (4.8%) pregnant women have gestational hypertension, 12 (3.6%) pregnant women have urinary tract infection and 5 (1.5%) pregnant women have advanced age.

DISCUSSION

A study based on data from "Nascer no Brasil Research" found that prenatal care offered to pregnant women using public health services or the private network in the country, observed that 75.8% of women started prenatal care until the 16th week of gestation. Prenatal care when started early can contribute to favorable maternal and fetal outcomes, avoiding complications during pregnancy and childbirth (SAMPAIO; ROCHA; LEAL, 2018). According to the World Health Organization, the start of monitoring prenatal consultations must be early, up to the 12th week of pregnancy and the minimum number of consultations indicated is six consultations. Special attention must be given to high-risk pregnant women, with the addition of outpatient monitoring with multidisciplinary and interdisciplinary care (MEDEIROS et al., 2019). During pregnancy, changes in the physiology and function of the thyroid occur, as there is a need for greater hormonal production for the pregnant woman and the fetus at this stage, changes in the level of secretion production lead to hyperthyroidism or hypothyroidism (ALMEIDA; MONTEIRO; TRAJANO, 2015). Hypothyroidism affects approximately 3% of pregnant women, causing maternal and neonatal complications such as, intrauterine growth restriction, fetal neurocognitive impairment and abortion (ALMEIDA; MONTEIRO; TRAJANO, 2015). During the follow-up at a high-risk outpatient clinic, it was observed that thyroid disease was present in 11 (12.5%) pregnant women, most of whom had hypothyroidism 10 (11.4%) (MONTEIRO et al, 2017). The prevalence of hyperthyroidism in pregnancy is approximately 0.1 to 0.4%, in cases accompanied inadequately, complications such as gestational hypertension, eclampsia, placental abruption, prematurity, greater morbidity or greater perinatal mortality may occur (BÁRTHOLO; MONTEIRO; TRAJANO, 2014).

In the literature, it was observed that the puerperal pregnancy cycle is the phase with the highest incidence of mental disorders in women. The intensity of psychological changes depends on issues related to family, marital, social, cultural and the pregnant woman's personality (COSTA et al., 2018).
In a study carried out in the second and third trimester of pregnancy, in the Basic Health Units in the Metropolitan Region of São Paulo, 76 (26.6%) cases of mental disorders were identified in the pregnant women, 46 (16.2%) of which were found with symptoms of depression/ dysthymia and 58 (20.4%) of anxiety/ panic (COSTA et al., 2018).

Late gestation is verified at an age greater than 35 years. The probable justifications for the occurrence of pregnancies at this age are higher socioeconomic status, higher education, higher activity of women in the labor market, lower parity, extended marriage and divorce rates followed by new unions (SAMPAIO; ROCHA; LEAL, 2018). In a maternity ward at the Professor Alberto Antunes University Hospital, located in the city of Maceió, there was a sample of 217 pregnant women, advanced age and overweight in pregnancy appeared associated to Gestational Diabetes Mellitus (GDM), since women in old age have six times more likely to develop GDM. The authors identified obesity or excessive maternal weight gain as risk factors for GDM in the studied population (OLIVEIRA; GRACILIANO, 2015). Regarding to the respiratory complications of pregnancy, it was evidenced that these are the consequences of physiological changes in the gestational period, such as increased intra-abdominal pressure and increased consumption of oxygen by the maternal organism (MENDES et al., 2013). Asthma is considered a high risk factor for the binomial during pregnancy, leads to complications and increases perinatal morbidity and mortality (MENDES et al., 2013). During pregnancy, pneumonia is not so frequent and does not have a serious evolution, but it is considered a condition that increases the risk of premature birth and low birth weight (MS, 2012).

According to the average pre-gestational BMI in a survey conducted by Hospital Israelita Albert Einstein, the average pre-gestational BMI of 151 pregnant women was 25.34 kg/m², which corresponds to a measure of overweight (FERREIRA et al ., 2020). In a hospital in São Paulo, an initial BMI average of 24.05 kg/m² was found and in another study developed in Pará de Minas (MG), a pre-pregnancy BMI of 23.30 kg/m² was observed, both indexes considered within the normal range (FONSECA et al., 2014); (ELEUTÉRIO et al., 2013).
Three hundred and twenty six pregnant women attended at the high-risk prenatal clinic in Rio Branco city, at Acre were interviewed, gestational hypertension was found in 10.4%, occurring in 18.4% of obese pregnant women and in 14.3% in pregnant women who had excessive weight gain during pregnancy, leading to complications during the gestational period, being one of the most frequent causes of maternal-fetal morbidity and mortality, which may be associated to the nutritional status of pregnant women, especially with obesity and excessive weight gain (SAMPAIO ; ROCHA; LEAL, 2018).

Chronic arterial hypertension (CAH) is common in 8% of women evaluated during prenatal care (SAMPAIO; ROCHA; LEAL, 2018). A study carried out by the Federal University of Paraná, a reference in high-risk pregnant women, found in a sample of 123 medical records of chronic hypertensive pregnant women, with Chronic Arterial Hypertension being associated with obesity in 17 (13.85%) pregnant women (MONTEIRO et al. , 2017). According to the Ministry of Health, UTI affects 17 to 20% of pregnant women. Its clinical picture can vary from asymptomatic bacteriuria, about 2 to 10% of pregnant women, to the condition of pyelonephritis leading to complications during pregnancy, such as premature labor (SAMPAIO; ROCHA; LEAL, 2018). In a study carried out at the high-risk outpatient clinic at the Federal University of Paraná, 12 (9.75%) pregnant women with urinary tract infection – UTI (MONTEIRO et al., 2017) were found. Smoking history appeared in 10 (11.4%) patients stratified as high risk in outpatient follow-up (MONTEIRO et al, 2017). Smoking is a risk factor for placenta previa, placental abruption, intrauterine growth restriction and prematurity (MS, 2012). The Ministry of Health recommends prophylaxis with anti-D immunoglobulin in cases of mothers with a negative RH factor, maternal-fetal alloimmunization still affects about five in every 1,000 pregnancies (MS, 2012). In the evaluation of pregnant women with alloimmunization, it is necessary to assess the obstetric history, as the conduct of the health professional depends on the history of fetal or neonatal involvement. Alloimmunization can cause hydrops and even fetal or neonatal death (MS, 2012).

Conclusion

In view of the aforementioned, risk factors associated to obesity were identified in pregnant women, followed up in the high-risk outpatient clinic, related to epidemiological conditions such as chronic arterial hypertension, thyroid disorders and smoking. Thus, it is essential that nurses work in high-risk prenatal care, providing care that prevents and controls obesity during pregnancy, as this professional contributes to the reduction of maternal and perinatal morbidity and mortality.

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