



## Socioeconomic and clinical profile of pregnant women with Gestational Hypertension Syndrome

Perfil socioeconômico e clínico de gestantes com Síndrome Hipertensiva Gestacional

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**Objective:** to know the socioeconomic and clinical profile of pregnant women with Gestational Hypertensive Syndrome. **Methods:** descriptive and exploratory study, carried out in Primary Care, with 50 pregnant women, using form. Data analyzed by descriptive statistics. For dichotomous questions a binomial test was used. **Results:** pregnant women aged between 18 and 35 years (76.0%), married (52.0%), housewife (44.0%), with high school education (64.0%), non-smokers (88.0%) and non-alcoholic (96.0%) predominated. They had never had an abortion (68.0%), had previous cesarean deliveries (37.0%), Diabetes Mellitus (24.0%), chronic Hypertension (60.0%), and were heart disease patients (6.0%), overweight (56.0%) and had bleeding during pregnancy (12.0%). **Conclusion:** young pregnant women of childbearing age prevailed with high school education and other comorbidities and important risk factors.

**Descriptors:** Nursing; Women's Health; Hypertension, Pregnancy-Induced.

**Objetivo:** conhecer o perfil socioeconômico e clínico de gestantes com Síndrome Hipertensiva Gestacional. **Métodos:** estudo descritivo e exploratório, realizado na Atenção Básica, com 50 gestantes, mediante formulário. Dados analisados pela estatística descritiva. Realização de teste binomial para questões dicotônicas. **Resultados:** predominaram gestantes com idades entre 18 e 35 anos (76,0%), casadas (52,0%), dona de casa (44,0%), com ensino médio completo (64,0%), não fumante (88,0%) e não etilista (96,0%). Nunca abortaram (68,0%), fizeram cesáreas antecedentes (37,0%), portadoras de Diabetes Mellitus (24,0%), Hipertensão arterial crônica (60,0%), cardiopatas (6,0%), acima do peso (56,0%) e hemorragia durante a gestação (12,0%). **Conclusão:** prevaleceram gestantes jovens, em idade fértil, com escolaridade de nível médio e associação de outras comorbidades e fatores de risco importantes.

**Descritores:** Enfermagem; Saúde da Mulher; Hipertensão Induzida pela Gravidez.

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## Introduction

Gestation is one of the most expected moments in the lives of many women, but some conditions can complicate and compromise this period. There are many diseases that can occur during pregnancy, reflecting, in a damaging way, the health of the maternal-fetal binomial<sup>(1)</sup>. It is important that the pregnant woman is aware of certain factors, such as obesity, age, daily habits, diet and some diseases, such as hypertensive syndromes, which is a worrying problem.

Hypertension in pregnancy is also called Gestational Hypertensive Syndrome, whose complications increase the incidence of maternal and perinatal morbidity and mortality, and together with infections and hemorrhages, are among the three causes of maternal death in Brazil<sup>(2)</sup>. Therefore, the knowledge of the epidemiological profile of pregnant women with the syndrome favors the planning of prenatal care, the early identification of the pathology and the development of a therapeutic plan for the adequate follow-up of these pregnant women.

Preeclampsia and eclampsia are hypertensive syndromes that occur after the 20th week of gestation, from the manifestation of protein loss through urine (proteinuria), with the disappearance of symptoms until the 12th week after delivery. According to the degree of disease involvement, preeclampsia can be classified as mild or severe, which may present lower blood pressure values, such as 140/90mmHg; and the severe one is usually identified from diastolic blood pressure equal to or greater than 110 mmHg, in addition to signs of hypertensive encephalopathy, proteinuria equal to or greater than 2.0 g in 24 hours, or by the presence of 2+, in tests with tape urinary system, among others.

In the same perspective, eclampsia is diagnosed in women with hypertension who develop tonic-clonic seizures that are not caused by epilepsy or any other generalized convulsive disease, or coma. In addi-

tion, there is preeclampsia superimposed on chronic hypertension that occurs when there is an acute elevation of blood pressure, as well as the appearance of preeclampsia in women with chronic hypertension or renal disease<sup>(3)</sup>.

The hypertensive syndromes that occur in the gestational period affect about 6 to 8.0% of the pregnant women and can cause irreparable damage to the pregnant woman and the fetus. Because they characterize high-risk pregnancies, hypertensive syndromes deserve special attention, with specialized care, trained professionals and rigorous follow-up. Thus, the prenatal consultation should provide the necessary tools so that the pregnant woman can have normal and uneventful gestation<sup>(4)</sup>.

Thus, nursing plays an important role in the care of hypertensive pregnant women, since it is able to direct care to the main fragilities, thus improving the quality of care and, consequently, reducing the future complications caused by this problem. Thus, the study aimed to know the socioeconomic and clinical profile of pregnant women with Gestational Hypertension Syndrome.

## Methods

It is a descriptive, exploratory study carried out in four Basic Health Units and a Maternal and Child Health Outpatient Clinic in a city in the northeast of Brazil, a reference in the care of high-risk pregnant women.

The population was composed of pregnant women with medical diagnosis of Gestational Hypertensive Syndrome. The study included pregnant women who met the inclusion criteria: over 18 years of age and who underwent prenatal care in the Maternal and Child Health Clinic and in Basic Health Units. Pregnant women hospitalized and without physical and psychic conditions were excluded from the study interviewer.

The sample was probabilistic, chosen in a ran-

dom simple manner, by drawing lots from the number of pregnant women with appointments for consultations, totaling 50 hypertensive pregnant women. The data were collected from September to November, 2017, through interviews, using a form composed of objective questions. The collection was performed in a closed room, free of interruptions, after signing the Informed Consent Term.

The data were analyzed through descriptive statistics, being expressed in simple frequency and percentage, through the software Statistical Package for the Social Sciences version 17.0. In this sense, the binomial test was performed to verify the hypothesis that the Yes and No responses of the variables related to the obstetric and clinical history have the same proportion (50.0%). Values of  $p < 0.05$  were considered significant.

The article was approved by the Research Ethics Committee of the *Nova Esperança* Nursing School, according to protocol nº 144/2012, in compliance with ethical standards governed by Resolution 466/12.

## Results

The results were divided into three parts: socioeconomic profile, obstetric and clinical history, and current gestational conditions of women with Gestational Hypertensive Syndrome. The socioeconomic profile of the pregnant women investigated is shown in Table 1.

Regarding the socioeconomic profile of the pregnant women (Table 1), it was possible to observe that the majority (76.0%) were 18 to 34 years old, slightly more than half (52.0%) were married; almost half (44.0%) housewives; 64.0% with high school education; 78.0% reported family income of 1 to 3 minimum wages; and the absolute majority declared themselves to be non-smokers (88.0%) and non-alcoholics (96.0%).

**Table 1 – Socioeconomic profile of pregnant women with Gestational Hypertensive Syndrome (n=50)**

Variables	n (%)
Age (years)	
18-34	38 (76.0)
>35	12 (24.0)
Marital status	
Married	26 (52.0)
Single	7 (14.0)
Stable union	17 (34.0)
Occupation	
Housewife	22 (44.0)
Cashier	2 (4.0)
Hairdresser	3 (6.0)
Maid	7 (14.0)
Saleswoman	8 (16.0)
Farmer	2 (4.0)
Self-employed	4 (2.0)
Manicure	2 (4.0)
Schooling	
Grade School	15 (30.0)
High School	32 (64.0)
University	3 (6.0)
Family Income (minimal wage)	
< 1	10 (20.0)
1 - 3	39 (78.0)
> 4	1 (2.0)
Smoker	
Yes	6 (12.0)
No	44 (88.0)
alcoholics	
Yes	2 (4.0)
No	48 (96.0)

**Table 2 – Obstetric and clinical history of pregnant women with Gestational Hypertensive Syndrome (n=50)**

Variables	Yes	No	p
	n (%)	n (%)	
Abortions	16 (32.0)	34 (68.0)	0.015*
Previous deliveries	37 (74.0)	13 (26.0)	<0.001
Cesarean deliveries	37 (100.0)	-	-
Vaginal delivery	9 (29.8)	26 (70.2)	0.006*
Diabetes mellitus	12 (24.0)	38 (76.0)	<0.001*
Chronic arterial hypertension	30 (60.0)	20 (40.0)	0.203
Urinary infection	24 (48.0)	26 (48.0)	0.888
Heart disease	3 (6.0)	47 (94.0)	<0.001*
thromboembolism	-	50 (100.0)	-
Anemia	10 (20.0)	40 (80.0)	<0.001*
Difficulty getting pregnant	9 (18.0)	41 (82.0)	<0.001*

\*Statistical significance ( $p < 0.05$ ; Binomial test)

Regarding the clinical history (Table 2), it was observed that they did not report abortions (68.0%), they had previously become pregnant (74.0%), all of them undergoing cesarean deliveries and only 29.8% in previous pregnancies. Considering the clinical history, it was observed that 76.0% were non-diabetic, 60.0% had chronic hypertension, 48.0% reported urinary infection, 82.0% had no difficulty in becoming pregnant, only 6.0% were patients with heart disease, none reported thromboembolism, and 20.0% reported having anemia before the current gestation. Statistical significance was also observed for the occurrence of abortion, vaginal delivery, Diabetes Mellitus, heart disease, anemia and difficulty to conceive.

**Table 3** – Conditions of the current gestation of pregnant women with Gestational Hypertensive Syndrome (n=50)

Variables	n (%)
Number of fetuses	
Único	46 (92.0)
Twin	4 (8.0)
Nutritional status	
Low weight	2 (4.0)
Eutrophy	20 (40.0)
Overweight	28 (56.0)
Urinary infection	
Yes	19 (28.0)
No	36 (72.0)
Gestational diabetes	
Yes	5 (10.0)
No	45 (90.0)
Anemia	
Yes	7 (14.0)
No	43 (86.0)
Threat of premature birth	
Yes	7 (14.0)
No	43 (86.0)
Trace elements or polyhydramnios	
Yes	-
No	50 (100.0)
Premature membrane rupture	
Yes	-
No	50 (100.0)
Delayed intrauterine growth	
Yes	-
No	50 (100.0)
Hemorrhage	
Yes	6 (12.0)
No	44 (88.0)

Table 3 shows the conditions of the current gestation at the time of the research, with 92.0% having single gestation, 56.0% were overweight, 28.0% reported urinary infection and 14.0% anemia. In addition, 14.0% of the pregnant women interviewed also reported having threatened preterm labor, but none reported trace elements or polyhydramnios, premature rupture of the membrane or retarded intrauterine growth. They also reported a 12.0% occurrence of bleeding.

## Discussion

The method used was considered as a limitation of the study. The descriptive and exploratory design made it impossible to contribute to evidence in nursing and health. However, it is important to highlight that the results found can contribute to the nursing services, with information that can direct actions, especially during the prenatal consultation, related to care, in order to reduce the occurrence of complications caused by the Syndrome studied.

However, it is important to emphasize that of the total of 50 pregnant women, 12 (24.0%) were over 35 years of age, being higher than the average found in the literature, around 13, 0%<sup>(5)</sup>. Women, who are 35 years of age or older are generally susceptible to adverse perinatal outcomes and maternal morbidity and mortality, being considered late pregnancies. Therefore, pregnancies in women over 35 years of age have been considered to be at high risk, mainly due to the increased incidence of hypertensive syndromes, premature rupture of membranes, presence of diabetes, and a higher chance of an Apgar score in the fifth minute be less than seven. Thus, the studies show that due to ovarian senescence and increased frequency of chronic diseases in women in this age group, as gestation is postponed, the probability of women becoming susceptible to various risks increases<sup>(6-7)</sup>.

Regarding marital status, occupation and schooling, the study corroborates the research carried out with high-risk pregnant women, which showed

that 52.5% of the women interviewed were married, 36.1% were housewives, and 47.5% completed high school. Among these variables, the level of education deserves attention, since low level of schooling may represent a risk factor, since it is related to less access to information and limited understanding of the importance of health care<sup>(8)</sup>.

The data related to alcohol consumption and smoking were found in a study that found 88.0% of non-alcoholic pregnant women and 93.6% who did not use tobacco<sup>(9)</sup>. Ethylene can cause a number of malformations, including typical craniofacial anomalies, growth impairment, musculoskeletal, genitourinary and cardiac alterations, dysfunction of the central nervous system, which may occur with mental deficits and behavioral disorders, which is characterized by the syndrome called Alcohol Syndrome Fetal. Smoking may be associated with obstetric complications, such as miscarriage, prematurity, ectopia, premature rupture of membranes, reduction of milk production and fetal death. If smoking is correlated with increased blood pressure, the chances of obstetric complications are considerably increased<sup>(10)</sup>.

Regarding the obstetric history of the pregnant women investigated, it was observed that 32.0% had abortion and most, previous pregnancies. Of these, all had undergone Cesarean delivery. Determining the way of delivery and the best time for this event in high-risk pregnancies represents the greatest dilemma experienced at the time. It is noteworthy that the interruption of pregnancy in pregnant women with preeclampsia can be programmed by elective cesarean section or induction of labor. The risk of complications is higher when cesarean section is performed, highlighting a greater chance of hemorrhagic complications, infections and hypertensive spikes<sup>(11)</sup>.

Relevant factors found in the study were the clinical history, that is, the presence of chronic diseases and/or infections. The onset of diabetes during pregnancy is a risk factor that favors the development of hypertensive crises. Chronic hypertension is another

problem that can be observed before pregnancy, before 20 weeks of gestation or be diagnosed for the first time during pregnancy, in which it is not resolved until 12 weeks after childbirth<sup>(5)</sup>. Urinary tract infections were described as a factor that can lead to risky pregnancies, leading to important complications in the gestational and perinatal periods for the mother-child binomial<sup>(12)</sup>.

The correlation between gestation and heart disease is fundamental. In Brazil, the incidence of heart disease during pregnancy exceeds international statistics, with a rate of 4.2%. In addition, in the pregnancy-puerperal cycle, universally, heart disease is considered the major cause of indirect maternal death<sup>(13)</sup>.

During pregnancy, the risk of venous thromboembolism increases five to ten times, and may reach 20 times in the puerperium when compared to non-pregnant women of the same age<sup>(14)</sup>. In the present study, no pregnant woman had a history of thromboembolism.

Anemia was present both as clinical and gestational history. The consequences of anemia are serious, especially during pregnancy. The incidence of anemia varies according to the characteristics of the population studied. In developing countries, anemia can be associated with nutritional problems and other diseases that potentiate it, such as gastrointestinal infections and parasitic diseases. The presence of anemia may potentiate maternal morbidity and mortality due to postpartum hemorrhage. Low levels of hemoglobin that correspond to moderate and severe anemia are associated with increased rates of maternal-fetal mortality, as well as the birth of low birth weight and prematurity infants<sup>(15)</sup>.

With regard to the current gestation, it was observed that the majority presented single gestation. Regarding nutritional status during gestation, most of the pregnant women reported being overweight. Currently, both maternal nutritional status and gestational weight gain have been the focus of several studies,

due to the increasing prevalence of disorders, as well as the essential role of gestational outcomes. Maternal obesity influences maternal health, birth weight, gestation time and possible pre and postpartum complications<sup>(16)</sup>.

Another relevant factor of the study was the occurrence of Gestational Diabetes. Epidemiological study has considered diabetes as a risk factor for Gestational Hypertensive Syndrome<sup>(17)</sup>. Thus, the risk factors for these disorders, in some cases, are associated in the same gestation, further compromising the course of this process. Therefore, the knowledge of these is of great relevance for the understanding of the etiological mechanism and planning of preventive measures<sup>(18)</sup>.

In the Gestational Hypertensive Syndrome, womb/placenta insufficiency is observed, with fundamental repercussions on the newborn. Among the fetal complications, prematurity, restricted growth, premature rupture of the membrane and variations in the amount of amniotic fluid (trace elements/polyhydramnios)<sup>(2)</sup> are prominent. In this, seven cases of threats of preterm birth were found and none of the other complications were reported.

Another complication that deserves attention is hemorrhage. In 2011, the World Health Organization listed the five main potentially fatal obstetric complications, among which are hemorrhage, pre-eclampsia and eclampsia<sup>(17)</sup>.

## Conclusion

Prevalence of young pregnant women of childbearing age with medium level schooling, in addition, there was an association of other comorbidities and important risk factors. The knowledge of the profile of pregnant women with Gestational Hypertensive Syndrome is important so that the health professionals, who work mainly in the prenatal, direct actions for the early diagnosis and the prevention of the main complications that Syndrome can cause.

## Collaborations

Lima JP and Veras LLN contributed to designing and designing, analyzing and interpreting data and writing the article. Pedrosa EKFS, Oliveira GSC and Guedes MVC assisted in the writing of the article and critical review of relevant intellectual content. All authors collaborated for final approval of the version to be published.

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