STUDY ON THE PREVALENCE OF HYPERTENSIVE DISEASES OF PREGNANCY

ESTUDO DA PREVALENCIA DAS DOENÇAS HIPERTENSIVAS DA GESTAÇÃO

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ABSTRACT

Objective: to determine the prevalence of hypertensive diseases of pregnancy in a public referral hospital. Method: the research was descriptive and exploratory with qualitative approach, developed through analysis of medical records of 100 parturients diagnosed with hypertensive disease of pregnancy from January to June/2007, the project was approved by the Ethics Committee in Research of the Educational Municipality Belo Jardim (CEP-AEB), registered under the no. 372/2007. Descriptive data analysis was performed establishing a correlation with the national literature. Results: it was found that most parturients studied had some type of hypertensive disease of pregnancy, thus demonstrating that prevalence is still very high compared with other pathologies in the pregnancy - puerperal cycle. Conclusion: in order to transform this reality, it is necessary that the Women's Health care is efficiently provided and the diagnosis of hypertensive disorders of pregnancy can be worked on behalf of pregnant women and thus there being a change from current practices in the country and women are informed during the pre-natal of the risks that this disease can cause to pregnancy-puerperal cycle. Descriptors: nursing; women's health; pregnancy; hypertension.

RESUMO

Objetivo: conhecer a prevalência das doenças hipertensivas específica da gestação. Método: pesquisa do tipo descritiva, exploratória com abordagem quantitativa, desenvolvida por meio de análise dos prontuários de 100 parturientes diagnosticada com a doença hipertensiva específica da gestação no período de janeiro a junho/2007, em hospital público de referência, conforme aprovação do projeto pelo Comitê de Ética em Pesquisa da Autarquia Educacional do Belo Jardim (CEP-AEB), protocolado sob o nº. 372/2007. Foi efetuada análise descritiva dos dados estabelecendo-se correlação com literatura nacional. Resultados: evidenciou-se que a maioria das parturientes analisadas apresentou algum tipo de doença hipertensiva específica da gestação, demonstrando assim que a prevalência ainda é muito alta quando comparada com as outras patologias do ciclo gravídico - puerperial. Conclusão: para que esta realidade seja transformada, é necessário que a assistência à Saúde da Mulher seja prestada com eficiência e que este diagnóstico das doenças hipertensivas da Gestação possa ser trabalhado em prol das gestantes e desta forma haja uma mudança das práticas vigentes no país e que no pré-natal as mulheres sejam informadas dos riscos que esta patologia pode vir a causar no ciclo gravídico puerperial. Descritores: enfermagem; saúde da mulher; gravidez; hipertensão.

RESUMEN

Objetivo: determinar la prevalencia de las enfermedades hipertensivas para el embarazo en un hospital público de referencia. Método: estudio descriptivo, exploratorio con enfoque cuantitativo, desarrollado por la revisión de registros médicos de 100 mujeres embarazadas diagnosticadas con la enfermedad hipertensiva del embarazo en el periodo de Enero a Junio/2007, tal como fue aprobado por el Comité de Ética en Investigación de la Municipalidad de Educación Belo Jardim (CEP-AEB), registrada con el núm. 372/2007. El análisis descriptivo de los datos se llevó a cabo estableciendo una correlación con la literatura nacional. Resultados: se encontró que la mayoría de las mujeres embarazadas estudiadas tenían algún tipo de enfermedad hipertensiva del embarazo, lo que demuestra que la prevalencia sigue siendo muy elevada en comparación con otras patologías del embarazo. Conclusión: para que esta realidad se transforme, es necesario que la atención de Salud de la Mujer se proporcione de manera eficiente y que el diagnóstico de los trastornos hipertensivos del embarazo que el diagnóstico puede ser trabajado en nombre de las mujeres embarazadas y por lo tanto hay un cambio de las prácticas actuales en el país y que las mujeres prenatales son informados de los riesgos que esta enfermedad puede llegar a tener sobre el embarazo y el parto. Descritores: enfermería; salud de la mujer; el embarazo; la hipertensión arterial.

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INTRODUCTION

The study of hypertensive disorders of pregnancy (HDP) has fascinated many researchers. Long time, more precisely since 2000 BC, there are references in Egyptian literature to seizures in pregnant women.¹

In 1900 was performed the recognition of hypertension, edema and proteinuria associated with seizures. It was then accepted that some placental toxin could be the etiologic factor causing this disease. The term popular toxemia is responsible for a remarkable range of changes affecting women in the puerperal pregnancy cycle.¹ ²

With the knowledge evolution it has been recognized that pre-eclampsia and eclampsia were part of specific hypertensive diseases of pregnancy. According to the Classification of Hypertensive Syndromes by the American Committee on Maternity Protection, both are defined as laboratory and clinical manifestations resulting from increased blood pressure in pregnancy.²

The pregnancy-induced hypertension is a disease of the last half of pregnancy characterized by hypertension, edema and proteinuria. Its occurrence was attributed to evil spirits, bad temper and more recently, sodium intake and weight gain during pregnancy.³

Among the HDP the pre-eclampsia has a worldwide incidence commonly described as 5-8%, with large variations in the literature. In twin pregnancy the incidence is 14%.⁴

This disease also is among the leading causes of maternal death and with high rate of perinatal morbidity and mortality worldwide. Several epidemiological factors influence its incidence. However, the role of each one of them is debatable, and no studies have proven and quantified the exact influence of these factors.⁵

The geographical distribution, climate and nutrition are intertwined, being difficult to define the most important factor. Several publications have reported the importance of the race factor in the preeclampsia incidence. The causes of hypertension during pregnancy are multiple and subject of extensive research and much speculation. The definitive cause remains unknown.⁶

Preeclampsia is a specific condition of human pregnancy; the signs and symptoms usually develop only during pregnancy and disappear quickly after the baby birth and the placenta elimination.⁷

However, preeclampsia’s pathophysiology has not yet been fully clarified. It is known that the disease is multisystemic, capable of affecting the functioning of various organs and systems of the pregnant woman. The intensity of this commitment and its extent vary according to the clinical form, disease duration and indirectly with the conduct.⁸

Preeclampsia is a pregnancy’ specific condition in which the hypertension develops after 20 weeks of gestation in previously normotensive woman, it is a multisystem disease process, sparred-vessel characterized by hemocoagulation, hypertension and proteinuria. The diagnosis of pre-eclampsia is traditionally based on hypertension with proteinuria, pathological edema or both. Preeclampsia is usually categorized as a mild or severe.⁹

Hypertension in pregnancy is defined as systolic pressure higher than or equal to 140 mmHg or diastolic pressure higher than or equal to 90 mmHg, measured on at least two occasions at intervals of at least four hours between measures.¹⁰

Proteinuria is defined as significant at least 0.3 g/L in urine 24 hours or 1 g/L (1+ or higher by the tape quantitative method) in simple samples.¹¹

Proteinuria indicates the extent of glomerular damage due to toxemia and usually appears after other symptoms. When preeclampsia worsens, urine can be very concentrated with small volume and containing cylinders, white and red blood cells and epithelial cells. Oliguria is a bad prognosis.¹²

Pathological edema is the fluid accumulation, clinically evident on the face, hands or abdomen that does not respond to 12 hours of bed rest. It can also be manifested as rapid weight gain over 2 kg in a week. The edema is a less accurate clinical parameter of pre-eclampsia although it is often the first to be detected.⁷

Although there is no known etiology for pre-eclampsia, the research offers some suggestions for preventing the disease, such as: adequate nutrition during gestation, including the daily ingestion of 60 to 70g protein, and 1,200 mg calcium and 6-8 glasses of liquids per day; adequate rest including 8 hours of sleep at night and a rest period during the day.⁸

The water therapy (immersion to the shoulders) to mobilize the extravascular fluid, observing the increased levels of renin, angiotensin, aldosterone and vasopressin in women with severe edema to prevent or make slow the pre-eclampsia progression, the Early prenatal care to identify women at risk and detect the pre-eclampsia development.⁷

Pre-eclampsia can manifest in mild form and evolve to the severe form, or already manifest with severe characteristics. Blood
pressure is at levels above 160/110mmHg, proteinuria exceeding 3 g in 24 hours, generalized edema affecting the lower and upper limbs, face and abdomen, excessive and fast weight gain, less than 1000g/week, urine volume decreased often less than 600ml/24hours, symptoms that occur are intense and persistent headache, visual disturbances classified as scotomas, diplopia, epigastric pain and hyperexcitability, are usually the symptoms preceding the convulsive crisis.6

Every pregnant woman with severe form of preeclampsia should be hospitalized immediately, and will only be discharged after the pregnancy termination and the improvement in her condition. She should also receive magnesium sulphate for prevention of convulsions and use antihypertensive drugs if necessary. In severe pre-eclampsia, the definitive treatment is termination of pregnancy. This may be by means of parturition induction or using Caesarean operation.6

A woman with severe pre-eclampsia presents multiple problems and thus represents a challenge for health care team. The care focuses on the stabilization and preparation for childbirth. It should be performed the maternal and fetal evaluation. The evaluations include a review of the cardiovascular, pulmonary, renal, hematological systems and SNC.6

Eclampsia is chronic-tonic seizures that can appear in pregnant or postpartum women, being preceded by worsening of hypertension and symptoms of the eclampsia eminence that include severe headache, diplopia, right hypochondrium pain, psychomotor agitation and hyperreflexia. Therefore, it is a complication that can be prevented. It affects the last quarter and/or postpartum, with rare episodes in the first two quarters and late puerperium. 8 -10

The incidence of hypertensive diseases specific to pregnancy is 5-10% of pregnancies and there is variation among different hospitals, regions and countries. The current trend of women delaying motherhood points to the possibility of increasing this prevalence.6

The hypertensive disorders of pregnancy can occur without warning or with gradual development of symptoms. A strategy to achieve the goal is to identify individuals at high risk for pre-natal consultation.5

During prenatal care should be reviewed to personal medical history, especially the presence of diabetes mellitus, kidney disease and hypertension. Family history is explored due to the occurrence of pre-eclamptic or hypertensive conditions, diabetes mellitus and other chronic conditions.6

Objectives of assistance to a pregnant woman admitted with hypertensive disease of pregnancy is to reduce the irritability of the central nervous system, control blood pressure, promote diuresis, control fetal well-being and finally, the induction of a healthy parturition for mother and child.1

After parturition, the symptoms of preeclampsia or eclampsia resolve quickly, usually in 48 hours. Careful evaluation of women with hypertensive disorder continues during the postpartum period. Measuring the blood pressure at least once every four hours for 48 hours or more frequently if the woman condition requires it.10

It must be evaluated the uterine tone and lochia flow. It must be performed the use of oxytocin or products of prostaglandin to bleeding control. It should also be evaluated the fetus, level of consciousness, blood pressure, pulse and respiratory status. Ask the women for reporting symptoms such as headache and blurred vision.11

Given the importance of this disease and obstetric and neonatal risks it poses to mother and child, this study aims at evaluating the prevalence of specific hypertensive diseases of pregnancy.

### METHODOLOGY

This is a descriptive, exploratory and retrospective study with quantitative approach.

The study was carried out in the Hospital Jesus de Nazaré, located in the city of Caruaru/PE, reference to the high-risk obstetrical care, both diagnosed in the emergency room and in the basic health units that make up its coverage area. That institution was chosen by meeting a significant demand of pregnant women with hypertensive diseases specific to pregnancy.

Data were obtained by consulting the patients’ records of women who were treated with diagnosis of specific hypertensive diseases of pregnancy. 100 medical records were analyzed.

A form was used, respecting the items contained in the Resolution No. 196/96 of the National Health Council, raising the following variables: data identification, socioeconomic data, data on obstetric and prenatal care received by pregnant women.

The data were processed using Epi Info version 3.2.2 and transported to a computerized database using Microsoft Excel. They have been shown and described in absolute numbers and percentages, using tables and graphs. For comparisons of means
and proportions were used, respectively, analysis of variance (ANOVA) and chi-square test respectively, in addition to the odds ratio.

Data collection was performed after approval of the research project by the Research Ethics Committee of the Educational Municipality of Belo Jardim (CEP-AEB), registered under no. 372/2007 and signing the Consent.

**RESULTS**

We analyzed 100 medical records of pregnant women who were diagnosed with hypertensive diseases of pregnancy during their stay. It was drawn a profile of the pregnant women with the following variables: age, the study shows that 34% of the sample were aged between 15-19 years, 17% were aged between 20 to 24 years, 21% between 25-29 years 13% between 30-34 years, 6% between 35-39 years and 9% between 40-44 years.

With regard to educational level, 1% of women were illiterate, 44% had incomplete primary education, 22% had completed elementary school, 20% had incomplete secondary education, 13% had completed the high school. Regarding the occupation/profession, the study showed that 36% were housewives, 34% were farmers, 25% were seamstresses, 3% waitresses and 2% traders. Analyzing the marital status, 57% of women were single and 43% married.

Regarding the implementation of prenatal, 45% had received prenatal care; however there was no record of how many consultations were performed and in 55% of the records was not found any notes on the achievement or not of pre-natal. Regarding the parity, 70% of mothers were primiparous and 30% multiparous.

From the clinical charts analyzed, DEHG was detected in 24% of pregnant women. Concerning the complications in the current pregnancy, among the 100 records analyzed 39% had complications and 61% had no complications.

Maternal complications were: 4.4% eclampia, 1.1% postpartum hemorrhage, 3% acute pulmonary edema, while fetal complications were: 5.6% prematurity, 21.3% fetal distress and intrauterine fetal death.

**DISCUSSION**

From the 100 records analyzed, we draw a socioeconomic profile of pregnant women with specific hypertensive disease of pregnancy (HDP). In regard to age, the vast majority (34%) of the women claimed being aged between 15 and 19 years compared with the literature; it is observed that the higher incidence of specific hypertensive diseases of pregnancy occurs in pregnant women with the same age, and that it has extremes of age: under 16 or over 40 years, both in case of primigravid women.

There are still some controversies concerning the association of advanced maternal age with the onset of preeclampsia. A multicenter study of the U.S. from The Calcium for Preeclampsia Prevention (CPEP) Study Group found no variation in the incidence of preeclampsia in the various age groups analyzed, but some authors attribute the higher incidence of preeclampsia to old age the high incidence of chronic hypertension associated with diabetes mellitus.

With respect to educational level, the study shows that 44% of pregnant women had the elementary school. According to these data, it can be seen that the low education hinders women's access to information and knowledge, which ultimately negatively affect the conditions for self-care, since it involves both the ease in searching and how to assimilate the information obtained about the care with health.

The elevations of schooling level by pregnant women significantly reduces the rates of perinatal morbidity and mortality which seems to be associated with the reduction of pregnancy problems due to education as a tool and a good indicator of socioeconomic conditions.

The study also shows that 70% of primiparous women who had preeclampsia had lower educational level.

The race factor in the prevalence of preeclampsia cannot be analyzed according to its importance, since in the study with regard to race there was no information in the records. The data on the occupation/profession showed that 36% of women were housewives, 48% earned less up to one minimum wage, 52% had basic sanitation and 43% lived in their own home.

When checked the occurrence of preeclampsia compared with these data, 86.3% of pregnant women had preeclampsia, demonstrating that the socioeconomic level directly influences the development of preeclampsia.

Currently, with regard to the socioeconomic profile, there are population-based studies in different countries confirming the difference in the incidence of preeclampsia according to the socioeconomic level.

Regarding marital status, 57% of pregnant women reported being single, thus...
highlighting that there is a relationship between marital status and how the mother takes care of health during pregnancy, since the marriage is considered essential for a successful pregnancy and according to some authors, it is expected that when a woman becomes pregnant the whole family is being prepared for the changes, and the support and guidance received in this period will influence the ability of the family to dealing with the problems resulting from pregnancy.\textsuperscript{2,3,7}

Complications of pregnancy are more common among single women, since most pregnant women by not married may suggest a major change of partners. And this is one of the risk causes for the preeclampsia development.\textsuperscript{11,4}

Regarding the importance of the partner factor, studies have shown that partners of pregnant women whose previous wives had preeclampsia are likely to develop it.\textsuperscript{2}

In the variable parity was found that 70% of pregnant women were primigravidae. The HDP is a disease of first pregnancy, since they are 6-8 times more likely to have the disease and its complications.\textsuperscript{1,2}

Regarding the implementation of prenatal, 45% of the women surveyed had received prenatal care; however, there was no record of how many searches were performed; any notes on performing or not prenatal care were not found in the 55% of records. Thus, demonstrating a big failure in completing the records; since they must identify as having risk conditions for preeclampsia development all those pregnant women that did not receive prenatal care. The HDP is a preventable disease, since it affects women of lower socioeconomic categories, its occurrence is strongly influenced by access to early diagnosis and treatment, quality care provided during prenatal care is essential as one of the components that contribute to significant coefficients reduction of maternal and infant mortality, allowing the diagnosis and treatment of various complications during pregnancy and the reduction or elimination of risk factors and behaviors, especially when the pregnant woman starts prenatal care early.\textsuperscript{12,15}

From the medical records analyzed, 53% of women had preeclampsia detected in the prenatal period. The primary goal of prenatal care is welcome to pregnant woman since the beginning of her pregnancy by analyzing the period of physical and emotional changes, which pregnant women experience in different ways.\textsuperscript{13} The adherence of women to prenatal care is related to the quality assistance from service and health professionals, which ultimately will be essential to reduce the high rates of maternal and perinatal mortality recorded in Brazil.\textsuperscript{16}

Regarding the gestational age, according to the records, all pregnant women were above the twentieth week of pregnancy when the disease has manifested. The pregnancy-induced hypertension appears after the twentieth week of pregnancy, the prognosis is usually favorable when a mild form is developed.\textsuperscript{17,19}

In relation to complications in the current pregnancy, among the records analyzed, 39% had complications and 61% had no complications. Among the maternal complications presented by women are stood out: eclampsia (4.4%), postpartum hemorrhage (1.1%) and acute pulmonary edema (3.3%), while fetal complications were prematurity (5 6%), fetal distress (21.3%) and intrauterine fetal death (3.3%).

When comparing with the literature, it is identified that the high rates of maternal mortality are due to a range of complications such as: disseminated intravascular coagulation, HELLP syndrome, pulmonary edema and aspiration, acute renal failure, premature placental removal, eclampsia, hemorrhage or liver failure, tromboebolism, cerebral hemorrhage; while the main neonatal complications are premature parturition, intrauterine growth restriction and intrauterine fetal death.\textsuperscript{20}

The study also demonstrated that after examining these variables, the prevalence for the development of specific diseases hypertensive of pregnancy was 17.8%. When comparing with the literature, we found that this rate is considered high, since through the advances arising from the care provided to women in the prenatal, specific hypertensive diseases of pregnancy also contribute directly to increased maternal morbidity and mortality in the country.\textsuperscript{11,15,19}

\textbf{FINAL REMARKS}

The present study showed that the prevalence of preeclampsia is still very high and that the variables analyzed using the socioeconomic data directly contribute as risk factors for the development of preeclampsia.

It is noticeable that there is still much to do for promotion of maternal and child health, since the preeclampsia is a condition of extreme importance due to the high rates of maternal and perinatal morbidity and mortality. The participation of pregnant women receiving prenatal guidance on this important status in women’s lives can...
contribute much to reducing the rates of this disease.

Thus, it is necessary for health services to establish strategies that enable the early entry of pregnant women in prenatal care, to ensure supply and access to services and especially, to promote improvements in quality of care provided to women during pregnancy and puerperium.

REFERENCES