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# Nursing assistance to hemodynamic changes in the serious period in patients with pre-eclampsy

Asistencia de enfermería a los cambios hemodinámicos en el período grave en pacientes con pre-eclampsia

Assistência de enfermagem as alterações hemodinâmicas no período gravídico em pacientes com pré-eclâmpsia

## ABSTRACT

**Objective:** To identify the findings published in the scientific literature on nursing care for hemodynamic changes in women with pre-eclampsia in the pregnancy cycle. **Method:** this is an integrative literature review, which brings together findings based on scientific evidence from primary studies in the Google Scholar databases, National Library of Medicine (PubMed), Virtual Health Library (VHL), Scientific Electronic Library Online (SciELO). **Results:** the sample consisted of five primary articles published in the last five years. Findings related to nursing care with regard to pre-eclampsia. **Conclusion:** through this study it was possible to confirm that nursing has a very important role in the care process for pregnant women, providing assistance, guidance and health education, thus avoiding possible problems.

**DESCRIPTORS:** Nursing care; Pre eclampsia; Gestational hypertension.

## RESUMEN

**Objetivo:** Identificar los hallazgos publicados en la literatura científica sobre el cuidado de enfermería de los cambios hemodinámicos en mujeres con preeclampsia en el ciclo del embarazo. **Método:** es una revisión integradora de la literatura, que reúne hallazgos basados en evidencia científica de estudios primarios en Google Scholar, National Library of Medicine (PubMed), Virtual Health Library (VHL), Scientific Electronic Library Online (SciELO). **Resultados:** la muestra estuvo conformada por cinco artículos primarios publicados en los últimos cinco años. Hallazgos relacionados con los cuidados de enfermería en relación con la preeclampsia. **Conclusión:** a través de este estudio se pudo constatar que la enfermería tiene un papel muy importante en el proceso de atención a la gestante, brindando asistencia, orientación y educación para la salud, evitando así posibles problemas.

**DESCRIPTORES:** Atención de enfermería; Preeclampsia; Hipertensión gestacional.

## RESUMO

**Objetivo:** Identificar os achados publicados na literatura científica sobre a assistência de enfermagem às alterações hemodinâmicas em mulheres com pré-eclâmpsia no ciclo gravídico. **Método:** trata-se de uma revisão integrativa da literatura, que reúne achados baseados em evidências científicas de estudos primários nas bases de dados Google Acadêmico, National Library of Medicine (PubMed), Biblioteca virtual de saúde (BVS), Scientific Electronic Library Online (SciELO). **Resultados:** a amostra constituiu-se de cinco artigos primários publicados nos últimos cinco anos. Achados relacionados aos cuidados de enfermagem no que se refere a pré-eclâmpsia. **Conclusão:** através deste estudo foi possível confirmar que a enfermagem tem papel importantíssimo no processo do cuidado às gestantes, proporcionando assistência, orientação e educação em saúde, evitando assim possíveis agravos.

**DESCRIPTORIOS:** Assistência de enfermagem; Pré-eclâmpsia; Hipertensão gestacional.

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## INTRODUCTION

According to the World Health Organization (WHO), almost 10% of pregnant women worldwide are affected by hypertensive disorders of pregnancy, which occupy the second place in the ranking of causes of maternal death, behind only hemorrhages. This group of diseases and conditions includes pre-eclampsia (PE), eclampsia, gestational hypertension and chronic hypertension.<sup>(1)</sup> Among hypertensive disorders, PE is the main affection for pregnant women, making it one of the biggest causes of mortality and morbidity related to pregnancy in the world, affecting about 5-8% of all pregnancies.<sup>(2)</sup>

PE is characterized by the emergence of hypertension after the 20th week of pregnancy (or earlier, in the case of gestational trophoblastic disease or fetal hydrops), being commonly accompanied by proteinuria, tending to disappear within 12 weeks after delivery. When proteinuria is not present, the diagnosis is identified by elevated blood pressure (BP), accompanied by headache, visual disturbances, abdominal pain, thrombocytopenia and increased liver enzymes.<sup>(2)</sup>

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after delivery. When proteinuria is not present, the diagnosis is identified by elevated blood pressure (BP), accompanied by headache, visual disturbances, abdominal pain, thrombocytopenia and increased liver enzymes.<sup>(3)</sup>

They stand out as the main aggravating factors for the appearance of PE, the first pregnancy, family and personal history of cardiovascular diseases such as hypertension and diabetes. For this reason, patients with these risk factors should receive special attention during prenatal consultations so that the diagnosis can be made early, since the implementation of preventive measures in the pregnancy-puerperal period guarantees better prognosis and maternal-fetal care.<sup>(4)</sup>

Analyzing this context and in view of the lack of curative treatment, pre-eclampsia requires early detection, adequate clinical management and effective monitoring. Thus, nursing care during the pregnancy-puerperal cycle plays an important role in controlling the problems of pre-eclampsia, as early diagnosis and qualified care are indispensable factors for a good prognosis.<sup>(5)</sup>

Considering the relevance of the theme, the guiding question of this study is: What scientific evidence is available in the literature on nursing care for hemodynamic changes in pregnancy in patients with preeclampsia? The proposed objective for this review is to identify

and describe findings from what has been published in the scientific literature on nursing assessment and care for hemodynamic changes in women with pre-eclampsia in the pregnancy cycle.

## METHOD

It is an integrative literature review, which brings together findings based on scientific evidence from primary studies, whose theme involves articles referring to nursing care to hemodynamic changes in the pregnancy cycle in patients with pre-eclampsia.

The integrative review aims to perform a synthesis of results in research analyzed in the light of the scientific literature on a given subject or issue. Having the potential to contribute to the development of nursing knowledge and care practices.<sup>(6)</sup>

This review followed the following steps: 1) Elaboration of the research problem. 2) Searching the databases with application of the inclusion and exclusion criteria; 3) Reading and critical analysis of the articles; 4) Categorization in order to organize the findings; 5) Interpretation and discussion of the results and 6) concluded by presenting the results and critical analysis of the data obtained relevant to the research in a descriptive manner.

The survey of articles was carried out in August and September 2020, using the following platforms as databases: Goo-

gle Scholar, National Library of Medicine (PubMed), Virtual Health Library (VHL), Scientific Eletronic Library Online (SciELO). The key words were established according to the Health Sciences Descriptors (DeCS), being: nursing care, pre-eclampsia, gestational hypertension. As an inclusion criterion, the original articles were considered, complete, with free

access and published in Portuguese and English, between the years 2015 to 2020, available in the previously cited databases. Exclusion criteria were articles that had an escape from the topic, dissertations, theses, and monographs, abstracts or with paid access.

A total of 411 article titles were read and those that met the theme were selec-

ted. Then, the abstracts were read, with 36 articles that met the inclusion criteria selected. Finally, after the complete reading of 13 articles, 05 were selected.

## RESULTS

The theoretical tie in Chart 1 refers to the authors, thematic of the articles, results and published magazine and year of publication. Of the five studies selected, two (02) articles were found in the Google Scholar database, another three (03) articles were from the VHL and only one (01) from SciELO. A critical synthesis of the results was performed with regard to nursing care for hemodynamic changes in the pregnancy period in patients with pre-eclampsia.

## DISCUSSION

Nursing care for pregnant women with hypertensive syndrome is essential for a good prognosis, requires the nurse professional an association between autonomy, critical sense and technical and scientific knowledge, juxtaposed to the assistance of a trained multi professional team, making the work process dynamic and resolving.<sup>(6)</sup>

Figure 1. Flowchart of research information in the databases: Google Scholar, National Library of Medicine (PubMed), Virtual Health Library (VHL), Scientific Eletronic Library Online (SciELO). Mapping the number of identified, included and excluded records, Cachoeira, BA, Brazil, 2020.

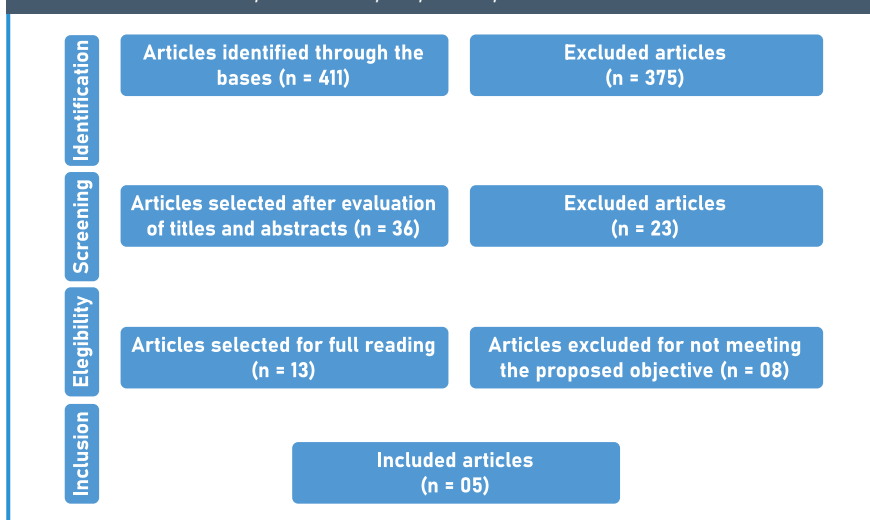


Chart 1. Articles selected in the databases between the years 2015 to 2020

N°	AUTORES	TÍTULO	RESULTADOS	REVISTA
1	Santana RS, Costa ACRR, Fontes FLL, Carvalho FR, Moura FF, Duarte JM, et al <sup>(7)</sup>	Importance of knowledge about signs and symptoms of pre-eclampsia for the implementation of nursing care	Compliance with drug prescription and measurement of vital signs, especially blood pressure, were the most commonly implemented precautions. It was also found that none of the interviewees mentioned care for fetal vitality, giving priority only to monitoring the mother; which shows the fragility of the assistance provided in the mother-child binomial question.	Revista Eletrônica Acervo Saúde 2019
2	Oliveira GS, Paixão GPN, Fraga CDS, Santos MKR, Santos MA. <sup>(8)</sup>	Assistance of nurses in gestational hypertensive syndrome in a hospital with low obstetric risk	They were consolidated into three categories, namely: the nurse's approach to women with hypertensive pregnancy syndrome; factors that hinder adequate assistance; essential role of the nurse to preserve the life of the mother-child binomial.	Revista CUIDARTE. 2017.
3	Silva CML, Miguel TBAR, Borges JAM, Aguiar AC, Reis PAM. <sup>(3)</sup>	Nursing care for pregnant women with Neurological syndrome: pre-eclampsia and eclampsia	After analysis, there were three thematic categories: assistance provided to patients with pre-eclampsia; perception of the nursing team on the Nursing Care Systematization. Patients' feelings during nursing care.	Revista Perspectiva da Saúde 2019

4	Oliveira KKPA, Andrade SSC, Silva FMC, Meneses LBA, Leite KNS, Oliveira SHS. <sup>(9)</sup>	Nursing care for pregnant women affected by pre-eclampsia	The central ideas were: Care focused on pre-eclampsia; Feelings about hospitalization; Dietary guidelines and blood pressure control; and Meeting individual needs and evaluating results.	Revista de Enfermagem UFPE On line 2016.
5	Phillips C, Boyd M. <sup>(10)</sup>	Assessment, Management, and Health Implications of Early-Onset Pre-eclampsia.	The priority in nursing care is the continuous vigilant evaluation for signs of worsening of the disease, considering the progressive character of pre-eclampsia. The goal is to keep a woman and her fetus / newborn safe before, during and after birth. Women with preeclampsia can be unstable for several reasons.	Nursing for Women's Health 2016

Source: Café MCV, Santana MF, Guimarães GLP, et al. 2021

In this context, nursing within the multidisciplinary team develops a direct collaborative role, providing optimization of care to patients. <sup>(9)</sup>

Access to prenatal care in the first trimester of pregnancy has been considered indicative of the quality of care provided by Primary Care Units. Prenatal care is essential for the early diagnosis of changes and, consequently, for interventions related to the vulnerability of the health of pregnant women and children. Monitoring and a multidisciplinary approach are essential, as well as ensuring a welcoming, unique and comprehensive assistance. In addition, health professionals should invest in actions that enable education and health care, aiming at the well-being of both the pregnant woman and the fetus. Despite this, some factors hinder nursing care for patients, especially in the context of primary care, such as failures in prenatal care, lack of information about possible changes and questions regarding signs and symptoms that lead to the investigation of possible pathologies. <sup>(6,11)</sup>

As a result, the performance of the multidisciplinary primary care team is essential, since patients, when they are not well oriented about the moment of delivery, end up developing a picture of fear and anxiety, which may contribute to an even greater imbalance of the clinical picture of the woman at the time of delivery. Unpreparedness for the diagnosis of an imminent risk pregnancy, presupposes the absence of continuing education and/

or deficiency in the assistance provided. From this observation, the importance of health education to guarantee qualified care is perceived. <sup>(7)</sup>

The assistance process goes through constant changes and in this sense, a search for updating is necessary. Continuing education is a viable path of professional and assistance improvement, thus giving the nursing team access to a set of experiences that are directly linked to initial training, enabling professionals to maintain, increase or significantly improve their care skills, culminating in thus in quality, resolute, humanized and timely health actions. <sup>(7,9)</sup>

Continuing education for health workers requires efforts to improve behaviors that promote the development of the work process. For the method to reach its effectiveness, it is necessary to develop education strategies that boost the participation of workers and thus train professionals in the exercise of their work activities. For this reason, by encouraging professionals to change, educational actions become able to minimize difficulties in teaching practices, and for this reason, nursing aims to outline goals to be achieved by the entire team. <sup>(12)</sup> In this way, this set of actions allows the professional nurse constant updates, which can even make possible, during prenatal care, the early diagnosis of hypertensive disorders of pregnancy, of which preeclampsia is part.

Among the possibilities for presenting pre-eclampsia is early onset, before 34

weeks of gestation, which predisposes to possible adverse events such as premature birth. The cases of PE that are detected in advance represent only a small number when compared to the total number of cases of the disease, this means that women who receive the diagnosis late, lack specific and accurate screening to detect clinical changes. <sup>(10)</sup>

Although the diagnosis of early-onset PE is challenging, since the disease progresses insidiously for weeks until the first symptoms appear, which allow the woman to self-perceive, so that she can report them at the time of the consultation, appropriate guidance is needed for timely identification and adequate clinical management, since PE is more than a simple hypertensive disorder and requires specific care. <sup>(10)</sup>

Ignorance about the disease can be remedied through effective prenatal care, with continuous monitoring, with assistance during pregnancy based on guidelines and answers to doubts. There are also other factors that interfere with the quality of care, such as the lack of fetal evaluation, lack of knowledge to handle the equipment and even lack of knowledge about the disease itself. <sup>(7)</sup>

Thus, the evaluation of fetal well-being and general growth, together with the monitoring and measurement of the pregnant woman's blood pressure, are essential steps for the correct referral of patients with pre-eclampsia. In addition, reception through qualified listening also plays a major role during nursing care, as

it demonstrates concern for the pregnant woman based on her singularities, and for this reason, the moment of admission is essential to strengthen the bond between the professional and the mother. As a result, personalizing care is extremely important, since individual care provides greater knowledge about the clinical condition of each patient.<sup>(6)</sup>

In the hospital environment, nurses need to be able to identify clinical manifestations and make the first calls in an assertive way, establishing conducts such as: blood pressure measurement four times a day, guarantee of bed rest, proteinuria evaluation, guidelines for daily maternal verification of the fetal movements and observation of signs and symptoms of syndromes.<sup>(7)</sup>

It also stands out as the nursing care commonly implemented, compliance

with the drug prescription. According to the Brazilian Federation of Gynecology and Obstetrics Associations (FEBRASGO - Federação Brasileira das Associações de Ginecologia e Obstetrícia), the first choice drug used in cases of hypertensive crisis is oral nifedipine (VO), however intravenous (IV) or intramuscular (IM) hydralazine can also be used as an alternative to treatment.<sup>(6,11)</sup>

In relation to the care with fetal vitality, the monitoring of the pregnant woman is often prioritized; evidencing a deficit in the nursing conduct provided to the pregnant-fetus binomial. It is important to note that when the pregnant woman is hospitalized, the fetus must be heard every day, and fetal movement must also be observed. In cases of mild pre-eclampsia, fetal well-being should be assessed once a week or according to changes in maternal

status. It is also important to point out that at the time of PE diagnosis, an ultrasound should be requested to monitor fetal development.<sup>(6,9)</sup>

## CONCLUSION

Through this study it was possible to confirm that nursing has a very important role in the care process for pregnant women, providing assistance, guidance and health education and thus avoiding possible problems. From this perspective, the nursing care found in this study involves: blood pressure measurement, early detection, qualified listening, adequate and timely guidance to pregnant women on signs and symptoms, compliance with the prescription, care for fetal vitality and need for education to improve the assistance provided. ■

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