

Importance of Preeclampsia Prevention During the Gestational Period

Ian Caldeira Ruppen^{1*}, Renam Arthur de Sousa¹, Patrícia de Vilhena Pimenta Neves¹, Gabriel Petermann², Maria Clara Malheiros Vizzotto², Luana Padovani¹, Luana Schiavon Dib¹, Camilla Antunes Zanini³, Karolina Bogusch Cava¹, Giovana Gimenez Trassi¹, Matheus Carraro Rodrigues¹, Giovanna Arissa Troleis Aoki¹, Emanuella Regina Vilhena da Silva¹, Heloíse de Arruda¹, Maria Julia Rosa Braz Dias¹, Maria Clara Palácio Fachina¹

Institution:

¹Centro Universitário Ingá – Uningá, Maringá, PR, Brazil.

²Faculdade Cesumar – Unicesumar, Maringá, PR Brazil.

³Faculdade Morgana Potrich – FAMP, Mineiros, GO, Brazil.

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Abstract

Preeclampsia is one of the leading causes of maternal and perinatal morbidity and mortality worldwide, especially in developing countries. Characterized by the onset of hypertension and proteinuria after the 20th week of gestation, its etiology involves genetic, immunological, and environmental factors. This article discusses the importance of preeclampsia prevention, highlighting strategies based on risk factor identification, lifestyle changes, and pharmacological interventions such as the use of low-dose aspirin.

Keywords:

Eclampsia; Complication; Hypertension; Proteinuria; Mortality.

Introduction

Preeclampsia is one of the leading causes of maternal and neonatal morbidity and mortality worldwide. Although its impact is more severe in low- and middle-income countries, its relevance as a public health issue is universal. It is characterized by high blood pressure and proteinuria after the 20th week of gestation and can progress to more severe conditions such as eclampsia and HELLP syndrome. The etiology of preeclampsia is not yet fully understood, but evidence suggests a complex interaction between genetic, immunological, and environmental factors. Known risk factors include a history of preeclampsia, obesity, diabetes, chronic hypertension, multiple pregnancies, and primiparity. Early diagnosis and the implementation of effective preventive measures are essential to minimize the risks associated with this condition.

Additionally, preeclampsia is associated with complications such as intrauterine growth restriction, preterm birth, and long-term adverse outcomes for both mother and baby. The prevention of preeclampsia is a topic of growing interest in the medical community due to the significant impact this condition has on public health. Identifying women at risk and implementing preventive interventions can mitigate the negative effects of the disease. Among the primary preventive measures are the use of low-dose aspirin for high-risk populations and calcium supplementation, particularly for women with low dietary calcium intake.

*Corresponding author:

Ian Caldeira Ruppen, Centro Universitário Ingá - Uningá, Maringá, Paraná, Brazil. Email: Ian2ruppen@gmail.com

In addition to pharmacological interventions, early screening is essential to identify risk factors such as a personal or family history of preeclampsia, pre-existing medical conditions (diabetes, chronic kidney disease, chronic hypertension), and sociodemographic characteristics. Modern technologies, including biochemical markers and imaging tests, are being explored to improve the accuracy of early diagnosis.

Objectives

This article presents a review of the importance of preeclampsia prevention, analyzing strategies based on risk factor identification, the use of modern diagnostic tools, and pharmacological interventions.

Materials and Methods

A literature review was conducted using articles published in the PUBMED, ScienceDirect, and Scielo databases to support the study.

Discussion

Preeclampsia prevention is a multidimensional challenge that requires a proactive approach from the beginning of prenatal care. The early identification of at-risk pregnant women is the first step in reducing the incidence of this condition. Strategies such as screening questionnaires and the evaluation of biochemical markers, such as placental growth factor (PlGF) and sFlt-1, have shown high sensitivity in predicting preeclampsia. Pharmacological interventions, particularly the use of low-dose aspirin, are widely recommended for high-risk women, according to guidelines from the World Health Organization and the American College of Obstetricians and Gynecologists. Studies show that aspirin administration, initiated between 12 and 16 weeks of gestation, can reduce the risk of early-onset preeclampsia by up to 60%.

Lifestyle modifications (LM), including weight control, a balanced diet, and regular physical activity, are fundamental measures to reduce risk factors associated with gestational hypertension. Additionally, continuous and individualized monitoring during prenatal care is essential to track maternal and fetal health. On the other hand, challenges persist in

Conclusion

The prevention of preeclampsia is a high priority for maternal and perinatal health. Strategies based on risk screening, pharmacological interventions such as aspirin use, and lifestyle modifications have demonstrated effectiveness in reducing the incidence and complications associated with this condition. The implementation of adequate prenatal care and the strengthening of public health policies are essential to ensure that all pregnant women, regardless of location or socioeconomic status, have access to effective preventive measures. Although significant progress has been made, continuous research is needed to elucidate the underlying mechanisms of preeclampsia and to develop new preventive strategies. Collaboration between healthcare professionals, researchers, and policymakers is essential to reduce the global impact of this condition and improve health outcomes for mothers and babies.

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implementing these strategies, especially in low-income areas where access to healthcare services and medication is limited. Public policies aimed at expanding access to quality prenatal care and health education are crucial in overcoming these barriers.