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Prediction and prevention of preeclampsia: Brazilian guidelines 2023

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Objective

To describe and discussed the Brazilian guidelines for prediction and prevention of pre-eclampsia published this year. This is one of the first national guidelines to date.

Methods

Keypoints • Preeclampsia (PE) is an important cause of maternal and perinatal mortality worldwide, accounts for 10% to 15% of direct maternal deaths, and 99% of these deaths are in low-income countries. • Preeclampsia is defined as systolic blood pressure of ≥140 mmHg and/or diastolic blood pressure of ≥90 mmHg on at least two occasions, measured four hours apart in previously normotensive women, and is accompanied by one or more of the following new-onset conditions after 20 weeks' gestation: (1) proteinuria, (2) evidence of other maternal organ dysfunction, or (3) uteroplacental dysfunction. • Preeclampsia is classified into: (1) early PE (delivery < 34^{+0} weeks' gestation); (2) preterm PE (delivery < 37^{+0} weeks' gestation); (3) late-onset PE (delivery ≥ 34^{+0} weeks' gestation); (4) term PE (delivery ≥ 37^{+0} weeks'gestation). • In Brazil, the incidence of PE varies from 1.5% to 7%; of preterm PE is 2% and of eclampsia is 0.6%. However, these statistics are likely to be underestimated and vary according to the region studied. • Screening strategies for PE vary depending on the parameters used, pre-test risk, outcome stratification, and the gestational age at which screening is performed. However, there is consensus in the literature that no single-parameter screening test has been shown to adjust the preexisting maternal risk for PE with sufficient specificity and sensitivity for clinical use.

Results

Recommendations • Screening of all pregnant women is recommended to identify those at higher risk for PE so that they can receive preventive measures and greater maternal-fetal surveillance during pregnancy. • The best strategies for screening PE involve several parameters in combination from a risk calculation algorithm. The decision on which maternal and fetal parameters should be included depends on the availability of resources in different settings. • The best risk calculation strategy for PE uses a combination of maternal factors, mean arterial pressure, mean uterine artery pulsatility index, maternal serum pregnancy-associated plasma protein A (PAPP-A) or placental growth factor (PlGF) at 11-14 weeks' gestation using the concurrent risk model developed by the Fetal Medicine Foundation. • At a risk cutoff of 1 in 100 for PE, the positive screening rate was 10%, and the detection rates of preterm and full-term PE were approximately 69% and 40%, respectively. Thus, these patients should be classified as high risk for PE. • Patients at high risk for PE, i. e. risk ≥ 1: 100 at 11-14 weeks' gestation, should start using acetylsalicylic acid (ASA) at a dose ≥ 100 mg, ideally 150 mg. Use should be started before 16 weeks and continued until 36 weeks.

Conclusion

Preeclampsia is a major cause of maternal and perinatal mortality and morbidity in LMIC. This guideline sets the importance of the adoption of this guideline in Brazil to improve maternal and perinatal ourcomes.