World Bulletin of Public Health (WBPH)
Available Online at: https://www.scholarexpress.net
Volume-50 September 2025
ISSN: 2749-3644

PERINATAL OUTCOMES OF PREECLAMPSIA AND ECLAMPSIA COMPLICATIONS DURING PREGNANCY

Author: Yuldasheva Barnokhonim, 5th-year student,
Faculty of Medicine, Department of General Medicine,
Alfraganus University
ORCID: 0000-0002-1825-0097
Email: barnoyuldasheva372@gmail.com
Phone: +998 99 472 88 41
Scientific Supervisor: Dr. Aziza Forxodovna Rakhmatullayeva,
Obstetrician-Gynecologist, Pediatric Gynecologist,
Reproductive Specialist, Colposcopist, Preventive Medicine Physician
Email: farhodovnaaziza36@gmail.com

Article history:
Received: June 20th 2025
Accepted: July 14th 2025

Abstract:
This article analyzes the perinatal outcomes of preeclampsia and eclampsia during pregnancy. Based on randomized clinical trials, retrospective and prospective studies, the impact on maternal and neonatal health was evaluated. The findings demonstrated significantly higher rates of preterm birth, low birth weight (LBW), low Apgar scores, neonatal intensive care unit (NICU) admissions, and perinatal mortality. The risk was particularly increased in cases of early-onset preeclampsia and in pregnancies complicated with HELLP syndrome.

Keywords: preeclampsia, eclampsia, perinatal outcomes, NICU, mortality

INTRODUCTION: Preeclampsia and eclampsia are among the most severe pregnancy-related complications that pose major risks to maternal and neonatal health worldwide. According to the World Health Organization (WHO), preeclampsia occurs in 2–8% of pregnancies and is a leading cause of maternal and perinatal morbidity and mortality. Eclampsia, the most dangerous progression of severe preeclampsia, manifests with seizures and neurological complications. This study aims to evaluate the perinatal outcomes associated with preeclampsia and eclampsia, including rates of preterm birth, low birth weight, NICU admission, and perinatal mortality, based on international clinical and epidemiological studies.

METHODS: The study is based on a systematic review of randomized clinical trials, retrospective and prospective observational studies. Clinical data were analyzed using chi-square tests, t-tests, and logistic regression to determine associations between hypertensive disorders of pregnancy and adverse perinatal outcomes.
Maternal complications assessed: HELLP syndrome, obstetric hemorrhage, emergency cesarean delivery.
Perinatal complications assessed: perinatal mortality, NICU admission, preterm delivery, low birth weight.
Results: The analysis revealed that preeclampsia and eclampsia significantly worsen perinatal outcomes.

Condition	Preterm Birth	Weight	NICU Admission	Perinatal Mortality
Preeclampsia	20-25%	30-40%	20-30%	5--6%
Eclampsia	25-35%	40-50%	30-40%	10-17%
HELLP syndrome	30-40%	40-50%	35-45%	10-23%
Early-onset preeclampsia	30%	45%	40%	9.1%

NICU admission rates and perinatal mortality were found to be 2–3 times higher in early-onset preeclampsia and HELLP syndrome compared to late-onset forms.

DISCUSSION: Our findings confirm the significant adverse effects of preeclampsia and eclampsia on neonatal health outcomes. Previous studies from Ethiopia, Brazil, and India reported increased risks of cesarean delivery, preterm birth (<34 weeks), NICU admission, and perinatal death. Meta-analyses also highlighted that early-onset preeclampsia carries the highest perinatal mortality risk (9.1%).

World Bulletin of Public Health (WBPH)
Available Online at: https://www.scholarexpress.net
Volume-50 September 2025
ISSN: 2749-3644

Thus, preeclampsia and eclampsia remain leading contributors to maternal and perinatal morbidity and mortality globally.

Conclusion: Preeclampsia and eclampsia are among the most critical pregnancy complications with severe perinatal consequences. Early diagnosis, continuous antenatal surveillance, and timely delivery management are key preventive strategies. Particular attention should be given to early-onset preeclampsia and HELLP syndrome due to their strong association with adverse perinatal outcomes.

RECOMMENDATIONS

1. Strengthen antenatal screening and risk stratification for hypertensive disorders of pregnancy.
2. Expand prospective multicenter research to evaluate management strategies.
3. Implement early intervention and evidence-based clinical guidelines in obstetric practice.
4. Increase NICU capacity and perinatal intensive care support in high-risk pregnancies.

REFERENCES

1. Cunningham, F. G., Leveno, K. J., Bloom, S. L. Williams Obstetrics. 26th Edition. New York: McGraw-Hill Education, 2022.
2. Steegers, E. A. P., von Dadelszen, P., Duvekot, J. J., Pijnenborg, R. Pre-eclampsia. The Lancet. 2010; 376(9741): 631–644.
3. Sibai, B. M. Diagnosis, prevention, and management of eclampsia. Obstetrics & Gynecology. 2005; 105(2): 402–410.
4. World Health Organization (WHO). Recommendations for prevention and treatment of pre-eclampsia and eclampsia. Geneva: WHO Press, 2011.
5. Roberts, J. M., Hubel, C. A. The Two-Stage Model of Preeclampsia: Variations on the Theme. Placenta. 2009; 30 Suppl A: S32–S37.
6. Redman, C. W. G., Sargent, I. L. Placental stress and pre-eclampsia: a revised view. Placenta. 2009; 30 Suppl A: S38–S42.
7. Magee, L. A., von Dadelszen, P., Stones, W., Mathai, M. The FIGO textbook of pregnancy hypertension. London: Global Library of Women's Medicine, 2016.
8. Abdullaeva, Sh. Kh. Fundamentals of Obstetrics and Gynecology. Tashkent: Fan Publishing, 2019.
9. Mirzaev, B. A., Karimova, N. Yu. Clinical Cases in Obstetrics. Samarkand: SamSU Press, 2020.
10. Khodjaeva, D. R. Modern Approaches in Perinatology and Neonatology. Tashkent: Ilm-Ziyo, 2021.