

INTRODUCTION

- HDPs cause 14% of maternal deaths and significant morbidity, with rising hospitalizations.
- Preeclampsia causes severe complications; gestational and chronic hypertension lead to fetal and maternal risks.
- HDPs increase long-term cardiovascular risks for both mothers and children.
- The fullPIERS model predicts outcomes but is underused, especially in low-resource settings.
- This study linked maternal outcomes in preeclampsia to the fullPIERS calculator.

OBJECTIVES

- [1] Evaluate maternal outcomes in preeclamptic patients and their correlation with the fullPIERS calculator.
- [2] Establish a cut-off value and assess fetal outcomes.

CONCLUSION

- Chest pain/dyspnea & SpO₂ <94.9% in fullPIERS were significantly linked to adverse maternal outcomes.
- ROC analysis showed fullPIERS strongly predicts adverse maternal outcomes with a cut-off of 6.9.
- FullPIERS was linked to adverse neonatal outcomes, with moderate discrimination in ROC analysis.
- FullPIERS should be included in regular clinical practice.

MATERIAL AND METHODS

- The prospective observational study was conducted for a year at Deen Dayal Upadhyay Hospital, Delhi.
- **INCLUSION CRITERIA:** Hospitalized patients of preeclampsia not in labor.
- **EXCLUSION CRITERIA:** [1] PIH patient presenting with severe maternal complications at admission. [2] Women having other medical disorders (thyroid disorder, heart disease, SLE, epilepsy, chronic renal diseases, chronic liver diseases, pulmonary diseases, severe anemia, fever, diabetes, etc.).
- **SAMPLING & DATA COLLECTION:** **n = 120 patients**, Sample size (n) = (Z_{1-α/2})² (p) (q) / a (d₂)
- **Tools and operational definitions:** A risk prediction score was calculated using the **fullPIERS calculator**.
- The piers score is obtained from PIERS Calculator, using Gestational Age, SpO₂, Platelets, creatinine & AST. It helps determine the cut-off for low risk (<2.5%) and high risk (≥30%) cases (Srivastava study)
- **Maternal adverse outcomes:** Maternal mortality, eclampsia, hepatic hematoma, GCS score <13, DIC, stroke, Cortical blindness, retinal detachment, RIND, PRES, Renal failure, PPH requiring transfusion or hysterectomy, Placental abruption, MI, pulmonary edema, severe breathing difficulty (spo₂<90%).
- **Fetal adverse outcome:** SGA, preterm birth, 5-minute APGAR score <5, NICU admission, stillbirth.

RESULTS

- In the present study, FullPIERS scores for maternal outcomes shows 40% of patients with adverse outcomes had scores ≥30, while 66% of those without adverse outcomes had scores 1-2.49 (p < 0.01).
- The leading adverse maternal outcome was HELLP syndrome (14.2%), followed by PPH with transfusion (13.3%), eclampsia (9.2%), placental abruption (3.3%), and pulmonary edema (1.7%). Other outcomes included one case each of cortical blindness, retinal detachment, DIC, encephalopathy, hysterectomy, and maternal death. ROC analysis showed a fullPIERS cut-off of 1.85 for predicting adverse maternal outcomes, with an AUC of 0.68 (p < 0.01, 95% CI = 0.58–0.78).
- It was observed that among 58 cases with an adverse neonatal outcomes, 17.2% had fullPIERS score ≥ 30, 1.7% had 20 to 29.9, 13.8% had 10 to 19.9, 5.2% had 5 to 9.8, 13.8% had 2.5 to 4.9, 41.4% had 1 to 2.49.

References: [1] L. Say, et al., Lancet Glob Health(2014), [2] M. Knight, et al., NPEU (2016), [3] A. E. Wong, et al., Elsevier(2011), [4] Wu CS, et al., AJOG (2009)

Declaration: The author hereby declares that there are no conflicts of interest related to the content of this research.