ABSTRACT

Determinants of Preeclampsia among Pregnant Women at Kudungga Sangatta Hospital: A Case-Control Study

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Background : Preeclampsia is a serious pregnancy complication that can adversely affect maternal and fetal health. Identifying factors associated with preeclampsia is important for early risk assessment and appropriate management.

Objective : This study aimed to identify factors associated with preeclampsia among pregnant women at Kudungga Hospital Sangatta.

Research Methods/ Implementation Methods : A case-control study included 112 hospitalized pregnant women, comprising 56 cases with preeclampsia and 56 controls without preeclampsia. Participants were selected using consecutive sampling, and data were obtained from medical records. Data were analyzed using chi-square tests and multiple logistic regression.

Results : Overall, 53.6% of participants were of non-risk age, 40.2% were multiparous, 57.1% had no prior history of hypertension, and 35.7% presented with anemia (hemoglobin <11 g/dL). Bivariable analysis revealed that preeclampsia was significantly associated with maternal age ($p = 0.001$), parity ($p < 0.001$), history of hypertension ($p < 0.001$), and hemoglobin levels ($p < 0.001$). In multivariable analysis, maternal age, history of hypertension, and hemoglobin levels remained independently associated with preeclampsia, whereas parity served as a significant confounding variable rather than an independent predictor.

Conclusion/Lesson Learned : Maternal age, history of hypertension, and low hemoglobin levels are independent determinants of preeclampsia, with parity acting as a confounder. These findings highlight the importance of integrating maternal demographic and baseline clinical profiles into early antenatal screening and risk assessment protocols.

Keyword : Age; Hemoglobin; Hypertension; Parity; Preeclampsia