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Impact of random urine proteinuria on maternal and fetal outcomes of pregnancy: A retrospective case-control study

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Background: Proteinuria is associated with hypertension and preeclampsia in pregnancy. However, the impact of random urine proteinuria on fetal and maternal outcomes has not been established. We investigated the influence of random urine proteinuria on the clinical outcomes of pregnancy.

Methods: From January 2008 to December 2010, 2822 patients were retrospectively studied. A total of 536 pregnant women with proteinuria in random urine and matched controls without proteinuria via propensity score matching were analyzed. Proteinuria was checked by the dipstick method.

Results: The patients' mean age was 33.0 ± 4.7 years, and the mean gestational age was 235.6 ± 50.6 days on admission. The prevalence of hypertension and chronic kidney disease was 2.4% (67) and 0.5% (15), respectively. Women with random urine proteinuria showed higher blood urea nitrogen levels and a higher incidence of hematuria. These women also had a higher incidence of preeclampsia, preterm labor, premature rupture of membranes, and intrauterine growth restriction. Proteinuria was strongly correlated with preeclampsia in both propensity score matching ($p < 0.001$, $r = 0.783$) and unmatched whole samples ($p < 0.001$, $r = 0.851$).

Conclusion: These findings suggest that random urine proteinuria is associated with preeclampsia, preterm labor, premature rupture of membrane, and intrauterine growth restriction.

Keywords: Dipstick, preeclampsia, Pregnancy, Proteinuria, Random urine