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Association of midterm eGFR and pregnancy outcomes - Role of unusual hemodynamic response

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Case Study: The present study was retrospective study among all pregnant ladies whose midterm eGFR was compared with their baseline and its change from baseline was considered as a surrogate marker for Mid term hyperfiltration among women without underlying evidence of CKD to further evaluate its value as a prognostic factor of the eGFR during gestation. Maternal renal hyperfiltration was represented by the highest eGFR, which was calculated using the Chronic Kidney Disease Epidemiology Collaboration method. An adverse pregnancy event was defined by the composition of preterm birth (gestational age <37 weeks), low birth weight (<2.5 kg), and preeclampsia. Total of 1045 pregnancies were evaluated to study. Among them, 15, 305, 680, and 45 mothers had midterm eGFR levels of 60–90, 90–120, 120–150, and ≥ 150 ml/min per 1.73 m^2 , respectively. The adjusted odds ratio and associated 95% confidence interval (95% CI) of an adverse pregnancy outcome for eGFR levels below and above the reference level of 120–150 ml/min per 1.73 m^2 were 1.97 (95% CI, 1.34 to 2.45; $P < 0.001$) for ≥ 150 ml/min per 1.73 m^2 ; 1.72 (95% CI, 1.30 to 2.10; $P < 0.001$) for 90–120 ml/min per 1.73 m^2 ; and 5.64 (95% CI, 4.2 to 12.40; $P < 0.001$) for 60–90 ml/min per 1.73 m^2 . There was an unique relationship between the midterm eGFR and adverse pregnancy outcomes, and the optimal range of midterm eGFR levels was 120–150 ml/min per 1.73 m^2 . In those females without evident functional renal impairment, the absence of prominent MRH could be a significant risk factor for poor pregnancy outcomes.