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Can urinary collagen IV excretion predict preeclampsia in early pregnancy better than microalbuminuria?

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Objectives: The purpose of the study was to measure the urinary collagens IV (U-coll IV) and microalbumin (MA) level in early pregnancy and to explore the role of excretion U-coll IV in prediction of preeclampsia (PE).

Study Design: A prospective study case control study. A total number of 119 pregnant women at 10-14 weeks of pregnancy were selected on the basis of availability. MA by immunoturbidimetry assay¹ and U-coll IV by enzyme immunoassay method Biotrin Urinary Collagen IV EIA kit were measured in these subjects and they were followed up to the term for the possible development of PE. MA was defined by albumin-creatinine ratio (ACR) above 32mg/g³ and high U-coll IV was defined by values above the cut-off point 2.74 ng/ml determined by the median value of the (controls). The data were analyzed by grouping

the subjects who developed PE in later stages of pregnancy (the PE group) and those who did not develop PE in later stages (Control group).

Results: From the total subjects 10 developed PE which shows a prevalence of about 8.4%. The PE group had higher value of ACR as compared to Control [ACR, mg/g, median (range), 42.3]. The sensitivity of ACR in predicting PE was 80%, specificity 49.54%, PPV 12.69% and NPV 96.42%. The sensitivity of high U-coll IV in predicting PE was 70%, specificity 50.5%, PPV 11.5% and NPV 94.8%.

Conclusions: It may be concluded that early pregnancy levels of MA and U-coll IV can be used as predictors of PE with high negative predictive value; and U-coll IV has no added advantage over MA in this respect.

Biography

K Fatema is currently working as an Associate Professor, Department of Obstetrics & Gynecology, Faridpur Medical College and Hospital, Faridpur, Bangladesh. She has completed her medical graduation (MBBS) from Sir Salimullah Medical College & Mitford Hospital, Dhaka, Bangladesh at her 25 yrs of age. She has achieved MS form BSMMU, Dhaka and PhD from University of CGI, USA. She is a teacher, clinician and a surgeon and a dedicated worker of Bangladesh Health Cadre trying hard to reduce maternal mortality in a developing South-East Asian country like Bangladesh. She has several publications and has much interest in academic research in the field of Obstetrics & Gynecology.

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