

OP 15 – Microalbuminuria and Blood Pressure in Nondiabetic Hypertensive Subjects Investigated at Family Practice Centre, University of Sri Jayewardenepura

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Background: Hypertension is a common asymptomatic disease which is a growing issue of public today. Microalbuminuria in hypertensive patients reflects systemic dysfunction of vascular endothelium, blood pressure control, changing of vascular permeability and haemostasis. Detection of microalbuminuria may help to identify early risk of cardiovascular diseases in hypertensive patients.

Objectives: This study was carried out to determine the correlation between microalbuminuria and blood pressure in non-diabetic hypertensive patients.

Methodology: A cross sectional study was carried out among 98 randomly selected non-diabetic hypertensive patients of age group between 35-85 years attending to family practice centre, University of Sri Jayewardenepura. Morning mid-stream urine sample, negative for proteinuria was used to calculate microalbumin to creatinine ratio. Microalbumin in urine was measured by a turbidimetric immunoassay method. The creatinine level in serum was estimated using a colorimetric kinetic method. Blood pressure, weight and height were measured and socio-demographic characteristics were noted by interviewer administered questionnaire. Data evaluation was done by independent sample t-test and Pearson correlation.

Results and Conclusions: There were 75 males and 25 females in the study population. The mean (SD) age and body mass index (BMI) of the subjects were 62.11 (8.22) years and 25.73 (5.15) Kg/m² respectively. The prevalence of microalbuminuria was found as 21%. Out of the subjects with microalbuminuria, 66.6% were females and 33.3% were males. Statistically significant weak positive correlations were found between microalbuminuria and systolic blood pressure ($r=0.27$, $p=0.007$), and microalbuminuria and diastolic blood pressure ($r=0.28$, $p=0.004$). The mean (SD) of the diastolic blood pressure of subjects with microalbuminuria (89.52 (9.2)) is significantly higher ($p=0.003$) when compared to diastolic blood pressure of subjects with normoalbuminuria (82.47 (9.9)). There was no correlation of microalbuminuria with age ($r=0.009$, $p=0.92$), body mass index ($r=0.08$, $p=0.4$). Microalbuminuria was associated with blood pressure. There was no statistically significant association of microalbuminuria with age and body mass index.

Keywords: Creatinine, hypertension, microalbuminuria