Summary

**Background:** Hypertension is one of the commonest causes of non-communicable diseases in Nigeria and it is also one of the commonest risk factors for chronic kidney disease (CKD). Evaluating microalbuminuria which is a predictor of CKD is crucial to early prevention of this scourge considering the high prevalence rate of CKD in Nigeria (8-10%).

**Purpose:** To evaluate microalbuminuria in the diagnosis of nephropathy (CKD) among adult hypertensives in Plateau State specialist hospital (PSSH), Jos with a view of recommending dipstick urinalysis in early screening of renal disease.

**Methodology:** A hospital based cross-sectional descriptive study was performed from January to March 2013 at the GOPD and MOPD of PSSH. A total of 152 hypertensive patients (47 males and 105 females) without a history of pre-existing kidney diseases participated in the study. A pre-tested questionnaire was used for collecting data on demographics, family and social history, disease information, social information and clinical characteristics. Anthropometric measurements such as: weight (kg), height (m), waist circumference (cm), hip circumference (cm), Waist/Hip ratio; Body Mass Index (BMI) (Kg/m²) were determined among respondents. A spot early morning urine samples were collected for dipstick urinalysis using Dirui H11 MA strips and those positive were quantitatively estimated for urinary albumin creatinine ratio (UACR). The data analysis was done using EPI info version 3.5.1 August 13, 2008 software Computation (CDC Atlanta Georgia, USA). A 95% confidence interval was used in this study and a P-value of less than 0.05 was considered significant. Information obtained was represented in frequencies and percentages. Mean and standard deviation were calculated for quantitative data. Pearson Chi square was used
to determine the association between qualitative variables. Multiple logistic regressions were used to determine the risk factors associated with microalbuminuria.

**Results:** A total of 152 hypertensive patients, 47 (30.9%) males and 105 (69.1%) females were randomly selected by balloting from patients attending the GOPD/MOPD of PSSH. The mean age of the respondents was 55.38 ± 12.77 years and the mean systolic and diastolic blood pressure was 140.00 ± 27.72 mmHg and 90.00 ± 16.11 mmHg respectively. Microalbuminuria was found in 90 subjects (59.2%) using dipstick (M11 Dirui), out of which 81 of them (90.0%) were confirmed using UACR, giving a prevalence of 53.3%. Nine risk factors (age, BMI, WHR, SBP, DBP, alcohol consumption, cigarette smoking duration of hypertension and habitual intake of analgesics/herbs) were considered simultaneously in a multiple logistic regression, after adjusting for confounding variables, the only independent determinant of elevated UACR/CKD was systolic blood pressure (SBP). P < 0.004, 95% CI: 1.0116-1.0643.

**Conclusion:** In Plateau State Specialist Hospital, microalbuminuria which is a predictor of nephropathy among hypertensives was common. Systolic blood pressure was the independent determinant risk factor for microalbuminuria (UACR). Majority of the respondents with CKD were detected using the microalbumin dipstick and were further confirmed by the UACR. The dipstick (M11 Dirui) was easy to perform and cheaper than the UACR.