SUMMARY

Background

Systemic hypertension (HTN) has been recognized as a very common cardiovascular disease (CVD) and a major risk factor in the development of congestive heart failure, ischaemic heart disease, chronic renal failure and stroke.

Some patients with essential/primary HTN (EHTN) manifest microalbuminuria (MAL) - an abnormal (30–300mg/24hours) urinary albumin excretion. MAL is considered as independent predictor of cardiovascular (CV) morbidity and mortality. Its level has also been found to correlate with blood pressure (BP) levels. Several studies conducted among Caucasians showed different prevalence rates. Early treatment of patients with MAL has been shown to prevent significant CV morbidity and mortality.

However, despite the strong prognosticating index of MAL in hypertension, it is not yet done routinely for hypertensive patients in Nigeria. Hence, the need for this study.

Objective

The general objective of the study is to describe the prevalence and factors associated with presence of microalbuminuria among adult Nigerian patients with essential hypertension in order to inform early detection and control practices.

Methods

Using a systematic sampling method with a sampling interval of 3, a total of 395 patients with essential HTN were screened for MAL using Micral test strip-II. Those with overt proteinuria were first excluded by testing their freshly passed morning urine with Combur-test strip. Both test strips are in-vitro diagnostic test strips from Roche Diagnostics for semi-quantitative estimation of microalbumin, and for estimation of urinary PH, protein and glucose respectively. Data were however analyzed for three hundred and sixty (360), the actual sample size. Twenty-five subjects did not complete the study.
Results

The prevalence rate of MAL was 77.5%. Although not statistically significant, MAL was observed to be more prevalent in females than males and majority of the patients were above 60 years. MAL was positively correlated with systolic BP, diastolic BP, mean arterial pressure and age. Body mass index (BMI), waist hip ratio (WHR), sex and family history of HTN did not show any significant association with MAL.

Conclusion

The study showed that there is a high prevalence of microalbuminuria in adult Nigerian hypertensive patients. It also revealed that MAL is influenced by a number of factors in these patients. Therefore, routine screening for MAL in all hypertensive patients is advocated and the presence of MAL in any hypertensive patient (old or new) calls for a more aggressive and comprehensive management and follow-up.

However, it is suggested that a large multi-centre case-control study be conducted to establish the prognostic significance of MAL in this environment.