

Pattern of kidney disease among hypertensive patients attending cardiac clinics in Dar es salaam

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ABSTRACT

BACKGROUND

Hypertension is a widespread problem. It is estimated that 1.28 billion adults aged 30-79 years globally have hypertension, and two-thirds of them are living in low- and middle-income countries .In Africa setting hypertension emerged as a major problem in recent years and in some countries is the second leading cause of chronic kidney disease. This is due to closely interlinked pathophysiological states such that sustained hypertension impairs kidney function. Progressive decline in kidney function conversely lead to worsening hypertension. Therefore, early detection of markers of kidney disease among hypertensive individuals and timely preventive intervention are the key strategies to prevent development of kidney disease among hypertensive patients.

AIM/OBJECTIVES

To determine the Patterns of kidney disease among hypertensive patients attending cardiac clinics in Dar es salaam.

METHOD

This is a descriptive cross-sectional study conducted among adult hypertensive patients attending hypertension clinic in Dar-es-Salaam, Tanzania .Structured questionnaires were used for social-demographic data. Blood pressure and anthropometric measurements (body weight and height) were taken by using standardized method. Blood sample was collected to measure serum creatinine and estimated eGFR, while urine was collected for biochemical analysis (dipstick method) and albumin creatinine ratio measurement.

RESULTS

In this study, 400 study participants were enrolled with a response rate of 100%. Of these, 287 (72%) were females, the mean, and standard deviation of the age was 59.9 and 15 respectively. Of the study participants majority had primary education 249(62%), 232(58%) were unemployed followed by self-employed 155(38.8%).240 (60%) had history of hypertension less than 10 years,346(86.5%) had no history of alcohol consumption and 380(95%) had no history of cigarette smoking Furthermore participants, 240(60%) and 211(52.8%) study participants had a blood pressure

of ≥ 140 mmHg for systolic and 90 mmHg for diastolic blood pressure respectively.. BMI of ≥ 25 kg/m² was found among 236(59%) study participants. Reduced eGFR (< 60 ml/min/1.73m²) and microalbuminuria were observed among 119 (30%) and 179 (61.5%) study participants respectively. The most pattern of kidney diseases from this study were AKI (22.3%), Nephrotic syndrome (12.8%) and End stage renal failure (2.8%) and 62.3% had no signs kidney disease.

CONCLUSION

Clinical pattern of kidney disease is dominated by AKI, Nephrotic Syndrome and end Stage Renal Disease (ESRD). Higher systolic blood pressure, advanced age, long duration of hypertension and unemployment were associated significantly with decline in eGFR. Furthermore an increase in body mass index (BMI) was (BMI) associated significantly with increase in albumin-creatinine ratio among adult hypertensive patients.

Recommendation

It is recommended that various measures against hypertension should be taken early to prevent the development of kidney disease that end up with end stage renal failure. Such measures may include implementing early kidney disease screening among hypertensive patients, comprehensive care at cardiac clinics as it will have beneficial impact on hypertension control and management of kidney disease. Furthermore it will minimize the cost of treating patients by early detection of early markers of hypertensive kidney disease and minimize the social-economic impact of disease treatment.