ASSESSMENT OF NUTRITIONAL STATUS AND DIET QUALITY OF RENAL OUT-PATIENTS AT SELECTED HOSPITALS IN ABEOKUTA, OGUN STATE NIGERIA

BY

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ABSTRACT

Renal disease is a global public health threat with severe, yet avoidable consequences. Evaluating the nutritional status and diet quality of patients with renal disease is crucial, as the disease significantly impacts metabolism, nutrient requirement and utilisation that develop into malnutrition. This study therefore, assessed the nutritional status and diet quality of renal out-patients at Federal Medical Centre and Sacred Hearts Hospitals in Abeokuta, Ogun State. Simple random sampling technique was used to select 297 respondents; semi-structured, interviewer-administered questionnaire was used to assess socio-demographic and economic characteristics. Anthropometric indices were assessed using standard procedures. Body Mass Index (BMI) and Waist-Hip Ratio (WHR) were calculated and categorized as underweight (<18.5 kg/m^2), normal (18-24.9 kg/m^2), overweight (25-29.9 kg/m^2) and obese (≥30.0 kg/m^2) and WHR was used to determine risk of central obesity (male > 0.90; female > 0.80). Serum creatinine, urea and electrolyte levels were analysed using standard clinical laboratory tests. Creatinine levels were used to calculate estimated glomerula filtrate rate (eGFr). Dietary intake was assessed using 24-hour dietary recall and analysed to determine nutrients intake and diet diversity. Adequacy of the nutrients was determined by comparing the nutrient intakes of the respondents with their recommended dietary allowance and classified as inadequate (< 60%), adequate (60-80%) and excess (> 80%). Dietary Diversity Score (DDS) was categorised as low (1-3), medium (4-6), and high ≥(7-9) using a nine-point scale. Diet quality was determined using the100-point Diet Quality Index-International (DQI-I) tools. DQI-I questionnaire was used to assess diet quality index (DQI) and categorised as low (≤35), average (35.1 - 70) and high (>70). Data were analysed using mean and standard deviations, frequencies, percentages, t-test, Chi-square test, analysis

of variance and Pearson's correlation at $p<0.05$ significance. Results showed that respondents' average age was 54±14.2years, 51.8% was male and 79.0% had tertiary education. Respondents' BMI was 24.38±7.30 kg/m^2 and prevalence of overweight and obesity were 31.94% and 14.93% respectively, while 78.48% of the respondents had high risk of obesity related diseases. The mean eGFr, urea and creatinine levels were 65.30±35.71 ml/min/1.73m^2, 25.22±18.02 mg/dl and 3.89±3.31 mg/dl, respectively. About one-third (38.17%) and 26.72% of the respondents had mild and moderate – severe loss of kidney function. Majority (85.7%) males had excess intake of carbohydrate and most of them had inadequate intake of calcium, phosphorus, sodium and zinc. Also, more than half of the females had inadequate intakes of most nutrients and excess intakes of vitamins A and B_3 and zinc. Two-third of the male and female respondents had high DDS of 66.2% and 62.99%, respectively. Respondents had moderate diet quality and 38.2% had mild loss of kidney function. Sex was significantly ($p=0.02$) associated with diet diversity. Educational level, proportion of money spent on food and BMI were significantly($r=0.167$, $p=0.03$) associated with WHR. The DQI was positively correlated with eGFr. Conclusively, the study found a strong relationship between the nutritional status, diet quality and the kidney function of renal out-patients at the selected hospitals. It is imperative to encourage consumptions of adequate nutrient and quality diet through individual specific interventions to promote healthy body weight.