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Plasma levels of uric acid, urea and creatinine in diabetics who visit the clinical analysis laboratory (CAn Lab) at Kwame Nkrumah University of Science and Technology, Kumasi-Ghana

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Diabetes mellitus is one of the most common metabolic diseases worldwide. This metabolic disorder contributes greatly to the significant proportion of the burden of renal diseases and renal damage (nephropathy). The aim of the study was to investigate the renal function of the diabetic patients who visit the clinical analysis laboratory (CAn Lab) at KNUST, Kumasi, Ghana. Demographic data as well as medical history were obtained through the administration of a questionnaire. Anthropometric measurements were taken and blood samples were analyzed for glucose, uric acid, urea and creatinine. Data collected were analyzed using SPSS version 16.0. A total of 34 diabetic patients within ages 40-77 years were recruited. Twenty-two (64.7%) of them were males with mean age of 57.40 ±11.8 years, while twelve (35.3%) were females with mean age of 58.17 ±7.47 years. There was a statistically significant difference between the mean duration of the disease in the females; 12.50 ±6.95, compared to 7.32±4.48 years in the males ($p=0.033$). The mean plasma creatinine level in the females was 84.17 ±54.73 µmol/L. There was a positive correlation between the age and plasma urea in the males diabetics ($r=0.455$, $p=0.034$). In the female diabetics, there was a positive correlation between FBS and the measured metabolic products ($r>0.5$, $p<0.05$), a positive correlation between BMI and uric acid ($r=0.576$, $p=0.005$) and a positive correlation between BMI and FBS ($r= 0.625$, $p= 0.030$). The general diabetic population was experiencing mild kidney failure but the diabetic females were more prone to end stage renal disease (ESRD).

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