SUMMARY

BACKGROUND: Diabetes Mellitus (DM) is assuming a pandemic dimension. The number of cases of diabetes worldwide among adults 20 years and above in 2010 was estimated to be 285 million and the number will increase to 438 million by the year 2030. The major part of this numerical increase will occur in the developing countries, Nigeria included. There is a paucity of data regarding the prevalence of DM in northern Nigeria in particular and the country in general, the latest data for the country was from the Expert committee report on Noncommunicable Disease (NCD) survey of 1997. This study is intended to contribute to data base for the national prevalence of DM.

STUDY OBJECTIVES: To determine the prevalence and correlates of DM and Glucose intolerance among adults in Kano.

SUBJECTS AND METHODS: In a multistage (3 stages) randomized cluster sampling scheme, 684 subjects were screened for diabetes mellitus according to WHO standard using casual plasma glucose. Data obtained included demography, anthropometry, blood pressure measurement and casual plasma glucose. The data was subsequently analysed using simple descriptive statistics with EPI-INFO 3.6 and Mini Tab 12 statistical packages.

Correlates of DM and IGT were determined. P value of less than 0.05 was considered to be statistically significant. IGT was determined through administration of 82g of glucose D to the subjects with CPG between 7.8mmol/l and 11.0mmol/l in fasting state and their 2hour post glucose load (2HPGL) estimated. Subjects with 2HPGL 7.8mmol/l but less than 11.1mmol/l were diagnosed as having IGT.

RESULTS: A total of 700 subjects were recruited of which 684 were evaluated, giving a response rate of 97.7%. Two hundred and fifty (36.5%) were males and 434 (63.5%) females. Of these 684
subjects, 59 subjects were found to have diabetes (19 males and 40 females), giving a crude total prevalence rate of 8.6%, crude male prevalence was 7.6% and crude female prevalence was 9.2 %, giving male : female ratio of 1 : 1.2, when adjusted for age and sex the overall age standardized prevalence was 6.9% (95% CI 5.0% - 8.8%). The male age standardized prevalence dropped to 6.4% (95% CI 2.9% - 9.4%) while that of females dropped to 8.8% (95% CI 4.0%- 13.6%). Twenty eight subjects (4.1%) were known to be living with diabetes before this study, while 31 (4.5%) subjects were newly diagnosed with diabetes during this study. The predominant type of DM was type 2 DM accounting for 95.5%.

Fourty two (42) subjects were found to have IGT given a prevalence of 6.2%, 10 (1.5%) males and 32 (4.7%) females.

Uni-variate analysis indicated that increased body mass index (BMI), waist circumference (WC), waist hip ratio (WHR), physical inactivity, parental history of DM, and age were significant risk factors for DM and glucose intolerance. However, logistic regression analysis showed that age and BMI were the only independent risk factors for DM after adjusting for the other risk factors. In contrast, social class, alcohol consumption and cigarette smoking did not appear to be associated risk factors for DM or IGT in this study.

Conclusions: The prevalence of DM among adults in Kano appears higher than previously reported with age and higher BMI as independent risk factors. The predominant form of DM in this study was Type 2 DM.