Abstract #246

INTERMEDIATE METABOLIC STATES AND DIABETES MELLITUS IN AN URBAN NIGERIAN POPULATION

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Objective: Although the transition from Intermediate metabolic states including impaired glucose tolerance (IGT) and impaired fasting glucose (IFG) that precede diabetes may take many years; current estimates indicate that many individuals with these intermediate states eventually develop diabetes. Since both categories identify individuals at risk for diabetes, the identification of individuals at risk for diabetes represents a strategic tool to prevent diabetes since the magnitude of the epidemic, coupled with the complex treatment requirements are difficult and costly to implement in both developing and developed countries.

Methods: The study was a cross sectional survey of a representative sample of Calabar metropolis comprising 645 males (56.9%) and 489 females (43.1%) aged between 15 and 79 years. A multistage sampling method was applied to select participants for the study. Anthropometric data was obtained and an oral glucose tolerance test (OGTT) was performed on all participants following which participants were categorized as normal glucose tolerance (NGT), IFG, IGT and diabetes mellitus (DM). Anthropometric indices were expressed as mean (standard deviation). The categorisation was done using American Diabetes Association (ADA) classification (2003) and the result in percentages.

Results: The prevalence of IFG was 8.8% (male 9.3%, female 8.2%), IGT 19.6% (male 21.1%, female 17.6%), isolated IFG 19% (male 17.2%, female 21.5%), isolated IGT 8.5% (male 9.8%, female 6.7%), combined IFG/IGT 4.5% (male 4.2%, female 4.9%), DM 6.5% (male 7.9%, female 4.7%).

Discussion: A number of studies have recently tried to determine whether IGT or IFG is a better predictor of future diabetes. Although there are some differences between the studies, the following general conclusions may be drawn. The incidence of subsequent diabetes is highest in individuals with combined IGT and IFG. It tends to be similar in those with isolated IFG (I-IFG) and I-IGT, although there may be differences in some populations suggesting a higher incidence in those with I-IFG. However, because in most populations I-IGT is much

commoner than I-IFG, it identifies a greater proportion of those who will develop diabetes. A substantial minority, well over a third, of individuals who develop diabetes have normal glucose tolerance at baseline.

Conclusion: Identification of individuals with intermediate metabolic states is a necessary strategy for the prevention of diabetes mellitus given the high prevalence of individuals with IGT