PREDISPOSING FACTORS FOR SOME TYPE 2 DIABETES MELLITUS COMPLICATIONS AMONG PATIENTS SEEKING HEALTH SERVICES AT KIAMBU DISTRICT HOSPITAL, KENYA

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ABSTRACT

Diabetes Mellitus (DM) describes a metabolic disorder of multiple aetiologies characterized by chronic hyperglycaemia with disturbances of carbohydrate, fat and protein metabolism. DM results from defects in insulin secretion, insulin action, or both. Chronic hyperglycaemia of Diabetes is associated with long-term damage, dysfunction and failure of various organs, especially the eyes, kidneys, nerves, heart and blood vessels. In Africa, a rise in diabetic complications has gone hand in hand with the growing disease prevalence, clearly demonstrating the importance of assessing complications. Kiambu District Hospital (KDH) has no records on diabetes morbidity. National prevalence of Diabetes in Kenya is estimated to be 6% according to a survey done in 2005 by the Division of Non Communicable Diseases (DNCD). Although the situation of Diabetes in Kiambu District has not been documented, it may not be different from the national prevalence.

The main objective of this study was to determine the factors associated with development of complications among diabetic patients seeking health services at KDH in Central Province, Kenya. A case-control study was conducted. Cases and controls were selected from among patients seeking services in the Diabetes Out-Patient Clinic (DOPC). A case was defined as any diabetic patient aged 15 years and above who was diagnosed with diabetic retinopathy or neuropathy. A control was defined as any diabetic patient who had no evidence of any diabetic complication at the time of recruitment into this study. Participants were interviewed by trained research assistants using a questionnaire after obtaining informed signed consent.

A total of 150 persons were interviewed with a case to control ratio of 1:2. Sixty four percent (32) of cases had neuropathy while 36% (18) had retinopathy. Eighty seven percent (130) of

respondents resided in Kiambu District while 13% (20) came from Thika District and Nairobi District.

The factors which were significantly associated with diabetic complications were: advanced age (cases mean age 63 years, controls mean age 55 years: T statistic 3.3, p value of 0.0014); male gender (OR 3.0, 95% CI 1.1- 8.5, p value 0.03); lack of formal education (OR 2.2, 95% CI 1.0-4.9, p value 0.04); spending more (>Ksh500 per month) on medications (OR 2.7, 95% CI 1-8, p value 0.03); and living near (1-5km) the health facility (OR 2.6, 95% CI (1.1-6.0, p value 0.03). Co-morbidity with hypertension did not achieve statistical significance though was borderline (OR 1.7, 95% CI 1.0-3.5, p value 0.06).

The findings of this study suggest that advanced age, male gender, complete lack of formal education, cases spending more on medications and living near health facility was associated with diabetic complications. More intensified care among the elderly is required with simplified but intensified health education and closer follow up. Diabetes screening should be encouraged and health education intensified with emphasis on reaching men. Co-morbidities such as high blood pressure should be addressed early and effectively. There is a need for improving the general literacy levels in the country. Further research work should be done to find out factors that could be associated with use or lack of use of health facilities to explain why living near health facility was found to be associated with DM complications in this study.