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## OCCURRENCE OF MICROALBUMINURIA AND THE ASSOCIATED RISK FACTORS AT THE TIME OF DIAGNOSIS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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World Health Organization predicts a rise in the incidence of diabetes mellitus to 300 million by 2025. Microalbuminuria is a strong predictor of overt diabetic nephropathy and cardiovascular morbidity and mortality among type 2 diabetic patients. Lack of data on the occurrence of microalbuminuria and the associated risk factors in type 2 diabetics at the time of diagnosis led to this study.

The sample studied (n=268) represented newly diagnosed type 2 diabetic patients between 20 and 70 years of age. Fasting blood samples were collected for lipid profile and glucose estimation using Randox assay kits. All the urine samples were screened to exclude subjects with macroalbuminuria, haematuria, ketonuria and uterine infection. All the subjects were screened for diabetic retinopathy. Microalbumin in the morning spot urine specimen was estimated using Randox kit. Persistent microalbuminuria was defined as an albumin/creatinine ratio between 30 and 299 µg/mg in a morning spot urine sample on at least 2 out of 3 collections done within one month after diagnosis of diabetes mellitus. Computer software SPSS was used for statistical analysis.

Out of the 268 diabetics, 67% were in the 40-59 years age group and 15% were elderly. The occurrence of microalbuminuria at the time of diagnosis was 25% with a slightly higher occurrence among males (27%) than females (23.7%). Its occurrence among the 50 to 70 years age category (63%) was higher than in the 20 to 49 years age category (36%) and the difference was marginally significant (p=0.074).

The significantly associated factors for microalbuminuria were marital status (p = 0.013), hypertension (p = 0.000), mean arterial pressure (p = 0.000), smoking (p = 0.012) and retinopathy (p = 0.000). With a borderline significance, advancing age (p = 0.074), location of hospital (p = 0.076) and fasting plasma glucose (P= 0.067) were associated with microalbuminuria. The significantly associated factors for microalbuminuria in males were advancing age, hypertension, smoking and retinopathy and in females location of hospital, marital status, hypertension, mean arterial pressure, retinopathy and fasting plasma glucose. The independent risk factors for microalbuminuria were hypertension (p = 0.000), retinopathy (p = 0.000) and marital status (p = 0.012). The independent risk factor for microalbuminuria in males was retinopathy only (p = 0.004) and in females it was hypertension (p = 0.006), retinopathy (p = 0.004) and marital status (p = 0.005).

Males with retinopathy and females with retinopathy and/or hypertension are more at risk of having microalbuminuria at the time of diagnosis.