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Relation of Urinary Microalbumin with Glycosylated Hemoglobin (HbA1c) and Duration of Type 2 Diabetes Mellitus (T2DM) in Selected Male and Female Patients

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Abstract : Long term irregularity in the glycemic state, especially in Type 2 diabetes mellitus (T2DM) patients, depicted by higher levels of HbA1c, is noted to be correlated with the development of microalbuminuria. The aim of the current study is to investigate the association of urinary microalbumin with HbA1c and with duration of diabetes mellitus in selected male and female T2DM patients. This cross-sectional study was carried out in a total of 70 patients, thirty-five each male and females with diagnosed T2DM, within the age group of 35-60 years. Biochemical parameters of urea, creatinine, urinary microalbumin, HbA1c, fasting blood glucose and post- parendial blood glucose were determined by standard methods. Data was statistically examined by student's t-test and Pearson's correlation. Results showed that comparison of healthy control subjects with both male and female T2DM patients depicted significantly elevated levels of all parameters in ($P < 0.05$ to $P < 0.001$). Comparison of duration of T2DM with the existence of urinary microalbumin was moderately significant ($P < 0.05$) when duration was less than 4 years, significant ($P < 0.01$) with duration of 4-6 years and markedly significant ($P < 0.001$) with duration of more than 6 years. It is concluded that in male and female T2DM patients, duration of DM as well as poor glycemic control, depicted by higher levels of HbA1c is significantly correlated with elevated levels of urinary microalbumin.

Keywords : type 2 diabetes mellitus, glycosylated hemoglobin, urinary microalbumin, T2DM, HbA1c
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