

Prevalence of Microalbuminuria and Its Relation with Various Risk Factors in Type 1 Diabetes Mellitus

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Abstract : Microalbuminuria is the earliest detectable marker of diabetic nephropathy. We planned to evaluate the prevalence of microalbuminuria in type 1 diabetics and correlate with various risk factor. We randomly selected 100 type 1 diabetic patients after inclusion and exclusion criteria from DCRC, S. P. Medical College, Bikaner. Clinical examinations for anthropometric parameters, hypertension, retinopathy, glycaemic status, lipid profile were done and microalbuminuria was estimated by micral test. Microalbuminuria was seen in 38% patients. The mean urinary albumin concentration was 96.61 mg/l in microalbuminuria positive cases, 134 mg/L in hypertensive patients while 74.5 mg/L in normal patients. Mean diabetic duration was 6.43 years in microalbuminurics. Albumin excretion increased significantly with age at onset of 10-18 years and declined thereafter. Microalbuminuria cases exhibited mean cholesterol 181.63 mg%, TG 130.94 mg%, LDL 109.87 mg%, HDL 57.5 mg% and VLDL 30.64 mg%. Mean urinary albumin concentration in patients with retinopathy was 160.52 mg/L while 78.66 mg/L without retinopathy. In multiple stepwise logistic regression analysis, a strong positive association was seen between microalbuminuria and hypertension (OR=5.087, CI=2.1319-12.101), fasting blood sugar (OR=3.491, CI=1.138-10.70), duration of diabetes (OR=3.41, CI=1.360-8.55) and HbA1c (OR=2.381, CI=1.1-5.64). The present study indicates that microalbuminuria is a common complication of type 1 diabetes mellitus and can be prevented by careful management of risk factors.

Keywords : type 1 diabetes, microalbuminuria, diabetic nephropathy, retinopathy, hypertension

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