



Medicine

Category: Clinical

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Risk Factors of Albuminuria in Adults with Type 2 Diabetes in Kuwait

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Introduction:

Diabetic nephropathy is the leading cause of kidney disease in diabetic patients and is associated with increased cardiovascular mortality. The risk of developing diabetic nephropathy starts with albuminuria, progressing from micro- to macroalbuminuria. This study is conducted to determine the risk factors associated with albuminuria in Kuwaiti subjects with type 2 diabetes.

Methods:

Kuwaiti subjects with type 2 diabetes attending the Diabetic Clinic at Al-Sabah Hospital, Kuwait were screened for albuminuria using urinary albumin:creatinine ratio test (U-ACR) or 24-hour collection. Albuminuria was defined as positive if U-ACR was >1.5 mg/mmol and/or 24 hour collection was >20 mg/day on 2 occasions. Macroalbuminuria was defined if 24 hour collection was >300 mg/day.

Results:

Data was available for 154 patients. The mean age was 49.1 ± 10.1 years and the duration of diabetes was 7.9 ± 7.0 years. Diabetic nephropathy was found in 43.5% of patients. The prevalence of microalbuminuria and macroalbuminuria were 27.3% and 16.2% respectively. Univariate analysis demonstrated significant associations between diabetic nephropathy and longer duration of diabetes, high glycated hemoglobin, elevated triglycerides, being hypertensive, systolic (>130 mmHg) and diastolic (>80 mmHg) blood pressure, higher body mass index, retinopathy, and treatment with sulphonylurea and/or insulin. Multivariate regression analysis showed that being hypertensive was the most significant predictor of albuminuria.

Conclusions:

Albuminuria is common among Kuwaiti adults with type 2 diabetes. Hypertension was the most significant independent risk factor for albuminuria. Early antihypertensive treatment is an important strategy to prevent diabetic nephropathy in these patients.

Key Words: Diabetes; Nephropathy; Kuwait

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