

Assessment of glycaemic control status and diabetic nephropathy among patients with type 2 diabetes mellitus in Dhamar, Yemen

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Abstract

Objectives: This study aimed to estimate the prevalence and associated risk factors for poor glycaemic control and diabetic nephropathy and to evaluate the association of glycaemic control status with diabetic nephropathy among type 2 diabetes mellitus (T2DM) patients in Dhamar, Yemen.

Methods: A cross-sectional study involved a total of 200 T2DM patients attending outpatient clinic at Dhamar General Hospital Commission, in Dhamar city during August 2019 to January 2020. Sociodemographic and clinical data were collected using a pre-tested questionnaire. Blood samples and urine samples were collected from the participants after overnight fasting. Fasting blood sugar, glycosylated haemoglobin (HbA1c), microalbuminuria and creatinine were estimated by standard procedures using automated systems.

Results: Poor glycaemic control and fair glycaemic control were detected in 116 (58%) and 28 (14%) of T2DM patients. Multivariate logistic analysis indicated that combined antihyperglycemic agent (oral tablet +insulin) (AOR= 4.57; %CI= 1.64-12.77; p= 0.004), and Qat chewing (AOR= 2.14; %CI=1.01-4.56; p= 0.048) were independent risk factors for poor glycaemic control among T2DM patients in this study. The prevalence of diabetic nephropathy was 32%. Multivariate analysis revealed that age >50 years (AOR= 2.37; %CI= 1.15-4.90; p= 0.020), hypertension (AOR= 3.22; %CI=1.39-7.47; p= 0.006), uncontrolled glycaemia (AOR=2.67; %CI=1.16-6.16; p= 0.022), diabetic duration \geq 5 years (AOR= 1.78; %CI=1.05-3.00, P= 0.031), and uneducated diabetic patients (AOR= 1.90; %CI=1.16-3.11; p= 0.010) were potential risk factors associated with diabetic nephropathy.

Conclusion: The prevalence of uncontrolled glycaemic status and diabetic nephropathy are significantly high among Yemeni T2DM patients which may contribute to an increasing prevalence of complications and thus may pose extra challenges to the poor health care services in Yemen.

Keywords: Type 2 diabetes mellitus, Glycaemic control, Nephropathy, Prevalence, Risk factors.

Biography

Abdulqawi Ali Qahtan Al-Shammakh is working as an Assist professor, Department of Medical Biochemistry, Faculty of Medicine, Thamar University, Vice Dean and Head of Laboratory Medicine Department, Genius University for Sciences and Technology.



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