Prevalence of chronic kidney disease in Tunisian diabetics: the TUN-CKDD survey

J. Labidi, A. Harzallah, B. Ben Kaab, I. Mami, S. Agrebi, A Azzabi, S. Chargui, M. Hadj-Brahim, M. Hammouda, S. Azaiez, S. Tlili, O. Lajili, H. Antit, Y. Hasni, S. Chenik, F. Chelbi, L. Rais and H. Skhiri

https://link.springer.com/article/10.1186/s12882-024-03501-5

PMID: 38403649 | PMCID: PMC10895808 | DOI: 10.1186/s12882-024-03501-5 | NCTNCT05577650

Background

In Tunisia, the prevalence of diabetes mellitus increased from 15.5% on 2016 to 23% by 2023. While Chronic Kidney Disease (CKD) stills the most dreaded complications of diabetes, studies on the prevalence of chronic kidney disease non-dialysis diet are scarce. The aim of this study was to assess the prevalence of chronic kidney disease among the Tunisian diabetic population based on investigators' specialty, demographic criteria (gender, age, duration of diabetes and geographic distribution) and diagnosis criteria (albuminuria and/or eGFR).

Methods

This observational, multicentric, and cross-sectional study enrolled all diabetic subjects from all regions of Tunisia with at least 3 months of follow-up before the inclusion date, from 09 January to 08 February 2023. CKD diagnosis was established based on the KDIGO guidelines. The study was carried out at medical departments and ambulatory clinics of different healthcare providers. Baseline data were collected by investigators using an electronic case report form (eCRF). Continuous variables were described by means, median, standard deviation, and quartiles. Categorical data were tabulated in frequencies and percentages.

Results

The overall prevalence of CKD among the 10,145 enrolled patients with diabetes mellitus was 38.7% with a 95%CI [37.8-39.6%]. 50.9% were male, with a mean age of 67.5 (± 11.3) years. The mean diabetes duration was 16.1 years (± 8.9). The highest CKD prevalence was noted among nephrologists (82.2%), while it was similar between the cardiologists and the primary care physicians (30.0%). CKD prevalence was highest among males (43.0% versus 35.1%) and increased proportionally with patients' age and diabetes duration. CKD was more frequent in the Mid-East Area when compared to other regions (49.9% versus 25.3 to 40.1% in other regions). Albuminuria was present within 6.6% of subjects with CKD, and it was found an estimated glomerular filtration rate (eGFR) < 60 ml/min/1.73 m² within 13.3% of subjects with CKD. 18.9% had both criteria.

Conclusions

In Tunisia, CKD among diabetics had a prevalence of 38.7%, approaching European prevalence. The prevalence discrepancy worldwide of CKD can be improved with a larger population size and by implementing standardized practices.

Keywords

Diabetes mellitus, Chronic kidney failure, Albuminuria, Prevalence