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Letter to the Editor

Prevalence of Chronic Kidney Disease among Hypertensive Patients in Gaza

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Dear Editor-in-Chief

The 2024 ESC Guidelines continue to define hypertension as office systolic BP of ≥140 mmHg or diastolic BP of ≥90 mmHg (1). Due to lack of symptoms, most of patients with hypertension are not aware that they have this disease. The prevalence of chronic kidney disease (CKD) among the adult general population was high and around between 9-17% (2).

Hypertension is the leading risk factor for CKD, the prevalence was higher compared with the general population associated with an increase in cardiovascular risk and death (3-4). The Seventh Report of the Joint National Committee of hypertension recommends screening the patients on antihypertensive treatment with creatinine measures 1 to 2 times annually (5).

This study was aimed to evaluate the prevalence of CKD and to assess the associated risk factors among hypertensive patients in Gaza.

This study is case control trial enrolled hypertensive patients with at least 4 months of follow-up before the inclusion date, from 05/09/2022 to 06/08/2023 at Alshifa Hospital Cardiology outpatient clinic.

Inclusion criteria were age ≥ 18 years old, and the hypertension duration at least more than 4 months. Exclusion criteria were patients with chronic dialysis or kidney transplant and pregnant women.

Total 469 patients, 317 (67.6%) patients hypertensive and 152 (32.4%) were normotensive. Overall, 267 (57%) of patients were male, with mean age 55.3±11.2 years. Seventeen percent of patients were diabetes, 125 (26.6%) of patients were dyslipidemia, 204 (43.5%) were current smoker and 121 (25.8%) of patients were obese.

The prevalence of chronic kidney disease in hypotensive group was 69(21.7%) and normal blood pressure group 8 (5.2%) Patients (*P*<001) Table 1.

Table 1: Chronic kidney disease findings between groups

Variable	Hypertensive group (N:317)	Normal blood pressure group (N:152)	*P* value
	69 (21.7%)	8 (5.2%)	0.001
e-GFR and albuminuria	35	4	
Albuminuria	6	1	
e-GFR	28	3	

E-GFR; estimated glomerular filtration rates

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The number of patients with duration of hypertension less than 5 years was 141 patients and the CKD was found in 16 patients (11.3%). The number of patients with hypertension duration more than 5 years was 176 patient and the CKD patients was performed in 53 (30.1%) of patients (P<0004).

The rate of 5.2% in normotensive patients, as compared with those with hypertensive patients may be because of lower age and low number of diabetes and dyslipidemia additionally to normal blood pressure level. This result was lower than the studies done in many African countries (31-55.4%) (8). On the other hand, our trial results were higher than with study conducted in USA (9.1%) (9). But the associated risk factors of chronic kidney disease in hypertensive patients are similar.

Among patients with hypertension, the prevalence of CKD was high. Age, obese, diabetes, long hypertension durations and dyslipidemia were mostly associated factors.

Conflict of Interest

The authors declare that there is no conflict of interests.

References

1. John William M E, Cian P M, Rosa M B, et al (2024). ESC Guidelines for the management of elevated blood pressure and hypertension. *Eur Heart J,* 45(38):3912-4018.
2. Bahrey D, Gebremedhn G, Mariye T, et al (2019). Prevalence and associated factors of chronic kidney disease among adult hypertensive patients in Tigray teaching hospitals: a cross-sectional study. *BMC Res Notes,* 12(1): 562.
3. Di Angelantonio E, Chowdhury R, Sarwar N, et al (2010). Chronic kidney disease and risk of major cardiovascular disease and non-vascular mortality: prospective population based cohort study. *BMJ,* 341:c4986.
4. Hunegnaw A, Mekonnen HS, Techane MA, et al (2020) Prevalence and Associated Factors of Chronic Kidney Disease among Adult Hypertensive Patients at Northwest Amhara Referral Hospitals, Northwest Ethiopia. *Int J Hypertens*, 26;2021:5515832.
5. Chobanian AV, Bakris GL, Black HR, et al (2003). Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. National Heart, Lung, and Blood Institute; National High Blood Pressure Education Program Coordinating Committee. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension,*42(6):1206-52.
6. Levey AS, Coresh JO, Greene TO, et al (2005). Expressing the MDRD Study Equation for Estimating GFR with IDMS Traceable (Gold Standard) Serum Creatinine Values. *J Am Soc Nephrol,* 16:69A.
7. Levey AS, Coresh J, Greene T, et al (2006). Using standardized serum creatinine values in the modification of diet in renal disease study equation for estimating glomerular filtration rate. *Ann Intern Med,* 145(4):247-54.
8. Chia YC, Ching SM (2012). Hypertension and the development of new onset chronic kidney disease over a 10 year period: a retrospective cohort study in a primary care setting in Malaysia. *BMC Nephrol*, 24;13:173.
9. Crews DC, Plantinga LC, Miller ER 3rd, et al (2010). Prevalence of chronic kidney disease in persons with undiagnosed or prehypertension in the United States. *Hypertension,* May;55 (5):1102-9.