ASSOCIATION OF IMPAIRED KIDNEY FUNCTION WITH MORTALITY IN RURAL UGANDA: RESULTS OF A GENERAL POPULATION COHORT STUDY

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Introduction: The burden of kidney disease in sub-Saharan Africa is currently poorly understood. Very limited monitoring and treatment is available for people affected. The association with other diseases and with mortality is unknown in this setting. We sought to determine the association between kidney function and subsequent all-cause mortality.

Methods: In a general population cohort with detailed measurement of health-related parameters in rural Uganda we estimated the baseline glomerular filtration rate (eGFR) between 2011-2014 in 5,678 participants. We followed participants up to March 2019 with regular ascertainment of mortality and migration. Using multivariable cox regression we determined associations between baseline eGFR and mortality.

Results: The median age of the participants at baseline was 36 years (IQR 24-50). 60.7% were female, 14.6% hypertensive, 9.7% HIV-positive and 1.8% diabetic. We registered 140 deaths with a median follow-up of 5.0 years. Adjusting for age and sex, HIV, hypertension, diabetes, BMI, marital status, and alcohol and tobacco use participants with eGFR ≤45 mls/min/1.73m² had six-fold higher mortality compared to those with eGFR ≥60mls/min/1.73m² (HR 6.12 (95% CI 2.27-16.43)) with strong evidence of a linear trend for risk of mortality as renal function declined (P<0.001).

Conclusions: In a prospective cohort with high rates of follow-up we found that baseline kidney function was associated with subsequently increased mortality in a graded manner. Improved understanding of the determinants of kidney disease and its progression are needed in order to inform interventions for prevention and treatment.

No conflict of interest

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THE INDIAN CHRONIC KIDNEY DISEASE STUDY: DETAILED DESCRIPTION OF BASELINE CHARACTERISTICS

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Introduction: The Indian Chronic Kidney Disease (CKD) study is an ongoing, nationwide, multi-center prospective cohort study recruiting participants with mild to moderate CKD that aims to identify risk factors for CKD development and progression and implement effective therapies. Here, we report the baseline socio demographic, etiology of CKD, risk factors and laboratory parameters in the inception cohort.

Methods: Patients with confirmed CKD between 18-70 years of age and estimated glomerular filtration rate (eGFR) of 15-60ml/min/1.73m² or eGFR >60ml/min/1.73m² and proteinuria/albuminuria with stable clinical course for at least 3 months have been recruited. Organ transplant recipients, those with malignancy for last 2 years, non-Indian ethnicity, pregnancy in case of females, on immunosuppressive therapy, life expectancy <1 year and with poor functional status are excluded. Socio-demographics and details regarding related to kidney diseases, traditional and indigenous risk factors, CVD and other co-morbidities are recorded. Blood and urine samples are being collected at baseline and annually. Primary outcome of the study is time to ESRD/RRT, 50% decline in eGFR and any new cardiovascular event.

Results: Total 4056 CKD subjects has been enrolled. The mean age of the cohort was 50.3 +/-11.8 years with 67.2% males. Median eGFR was 90mls/min/1.73m² (HR 6.12 (95% CI 2.27-16.43)) with strong evidence of a linear trend for risk of mortality as renal function declined (P<0.001).

Conclusions: In conclusion, among the DN subjects, socioeconomic factors were found to be strong risk factors for impaired QoL, as well as high platelet counts, high alkaline phosphatase levels, and clopidogrel and insulin use. The DN subjects showed lower QoL than the non-DN subjects in the domains of patient satisfaction and general health. In conclusion, we confirmed that DN itself affected QoL more strongly than other types of CKD.

No conflict of interest

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QUALITY OF LIFE IN PATIENTS WITH DIABETIC NEPHROPATHY: FINDINGS FROM THE KNOW-CKD (KOREAN COHORT STUDY FOR OUTCOME IN PATIENTS WITH CHRONIC KIDNEY DISEASE) COHORT

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Introduction: Diabetic nephropathy (DN) is a major cause of end-stage renal disease, and can affect quality of life (QoL) because it requires arduous lifelong management. This study analyzed QoL differences at baseline and after 5 years between DN anDiabetic nephropathy (DN) is a major cause of end-stage renal disease, and can affect quality of life (QoL) because it requires arduous lifelong management. This study analyzed QoL differences at baseline and after 5 years between DN and non-DN patients with other chronic kidney disease (CKD).d non-DN patients with other chronic kidney disease (CKD).

Methods: The analysis included subjects (n=1766) from the KNOW-CKD (KoreaN cohort study for Outcome in patients With Chronic Kidney Disease) cohort who completed the Kidney Disease Quality of Life Short Form (KDQOL-SF). The factors that influenced the QoL of participants with DN (n=390) were first analyzed, and differences in QoL between DN and non-DN participants was examined. To maintain homogeneity, most factors that influenced the QoL of participants with DN were controlled by propensity score-matched pair sampling using the greedy matching technique. In total, 239 DN and 239 non-DN subjects were finally selected, and differences in the mean KDQOL-SF scores between the 2 groups were then analyzed.

Results: In the multivariate linear regression model, higher QoL scores were found for taller DN subjects and lower QoL scores were found for those who were unemployed or unmarried, received Medical Aid, had lower economic status, had higher platelet counts and alkaline phosphatase levels, and used clopidogrel or insulin. Patient satisfaction (59.9 vs. 64.5, P=0.022) and general health (35.3 vs. 39.1, P=0.0041) were significantly lower in the DN group than in the non-DN group. Scores generally decreased in both groups during the 5-year follow-up, and the scores in the work status, sexual function, and role-physical domains were lower among patients with DN than among non-DN patients, but the differences were not statistically significant.

Conclusions: In conclusion, among the DN subjects, socioeconomic factors were found to be strong risk factors for impaired QoL, as well as high platelet counts, high alkaline phosphatase levels, and clopidogrel and insulin use. The DN subjects showed lower QoL than the non-DN subjects in the domains of patient satisfaction and general health. In conclusion, we confirmed that DN itself affected QoL more strongly than other types of CKD.

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