

[SaO025] PREVALENCE AND RISK FACTORS OF CHRONIC KIDNEY DISEASE (CKD) IN SOUTH KIVU, DEMOCRATIC REPUBLIC OF CONGO (DRC): A POPULATION-BASED STUDY.

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INTRODUCTION AND AIMS: The prevalence of CKD in African Americans and Western Africans is high but whether this applies to all populations from Sub-saharan Africa is unclear. We assessed the prevalence and risk factors of CKD in the adult South-Kivu population.

METHODS: We conducted a community-based, cross-sectional study (October 2016 - April 2017), in South-Kivu using a multistage random cluster sampling in both an urban (Bukavu) and a rural (Katana) area. Data collection was based on the WHO STEPwise approach for surveillance of chronic disease risk factors. Hypertension was defined as the average of the last two of three measurements $\geq 140/90$ mmHg or current antihypertensive treatment; diabetes as fasting capillary glucose ≥ 126 mg/dl or treated, and obesity as BMI ≥ 30 kg/m². All subjects provided a blood and spot urine sample. Dipstick (Multistix 8 SG®, Siemens) urinalysis was performed on site by the study team. Albumin-creatinine-ratio (ACR) and serum creatinine (IDMS-calibrated) were measured in Belgium. CKD was defined by ACR > 30 mg/g creatinine and/or eGFR < 60 ml/min/1.73m²(CKD-EPI). Adjusted Odds ratios (OR) were obtained by logistic regression to ascertain associations between CKD and risk factors.

RESULTS: We enrolled 1317 participants (730 rural, 587 urban), aged 41.1 ± 17.2 years (60.9 % women). The prevalence of hypertension, diabetes and obesity was 20.7% (95% CI 18.5-22.9), 3.8% (95%CI 2.7-4.8) and 9% (95% CI 7.4-10.5) respectively, without difference by site or gender. The prevalence of proteinuria (ACR > 30 mg/g) was 4.2 % (95% CI 2.8-5.4) while the overall prevalence of CKD was 7.1 % (95% CI 5.5-8.6), 6.5 % in rural and 8 % in urban participants. By logistic regression, age ≥ 56 years (OR 2.5; 95 % CI 1.17-5.6, $p=0.01$), hypertension (OR 2.8; 95%CI 1.6-5, $p<0.001$) and diabetes mellitus (OR 5.7; 95 % CI 2.5-12.7, $p<0.001$), were the independent predictors of CKD. As the use of the African American correction factor is debated in sub-Saharan Africans, a sensitivity analysis was made without correction factor. The prevalence of CKD increases further, from 7.1 % (95% CI 5.5-8.6) to 7.9 % (95% CI 6.5-9.5), without altering the main conclusions.

CONCLUSIONS: This is the first high-quality population-based study of the prevalence of CKD in Sub-saharan Africa. The prevalence of CKD and significant proteinuria was high in this relatively young South-Kivu population, without difference by rural/urban site or gender, and was driven mostly by classical risk factors. These results document the impact of the epidemiologic transition in sub-Saharan Africa. Additional studies aiming at elucidating genetic risk factors for CKD in this population are underway.

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