

Screening Chronic Kidney Disease in Madagascar: Findings from Five Provinces

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ABSTRACT

Chronic Kidney Disease (CKD) becomes a major public health problem. Almost of the time, patients in developing countries are seen lately with End-Stage of Renal Disease (ESRD). The main objective of this study is to evaluate CKD in Madagascar through a national survey by using strip test of creatinine. The second objective is to determine its associated factors. We have conducted a randomized cross-sectional study during 3 years. Screening was done in 5 out of 6 provinces including Tananarive, Fianarantsoa, Tamatave, Tuléar and Majunga provinces. Sampling was done with randomization by cluster methods. All residents Malagasy people aged over 18 years old were included. All incomplete survey and data were excluded. Sociodemographics, clinical and biological characteristics were retained. CKD was defined as a decrease of an estimated-glomerular filtration rate (e-GFR) of creatinine calculated with CKD EPI formula less than 60ml/mn/1.73m². Kidney Disease Improving Global Outcomes Classification was used to study the severity of CKD. STATA software was used for statistical analysis. In total, 1018 persons were included. Mean age was 42 years old (+/-15.8) with sex-ratio 1.2. CKD rate was 15.91%. Studied population was categorized in middle social class (64.54%). In 65.03% of cases, population were in activity. CKD proportion in stages G3a, G3b, G4 and G5 were seen respectively in 9.82%, 2.75%, 1.08% and 2.26%. After statistical analysis, CKD were associated with age: 50-74 years old (ORa=5.93; 95% CI 3.93-8.95; p=0.0000), over 75 years old (ORa=11.96; 95% CI 5.16-27.72; p=0.0000), personal history of hypertension (ORa=1.81; 95% CI 1.17-2.79; p=0.007), diabetes (ORa = 1.58; 95% CI 1.09-2.43; p=0.03) and upper social class (ORa= 2.56; 95% CI 1.21-5.41; p=0.013).

The prevalence of CKD increases in Madagascar. The first line therapeutic must focus on preventing by an early screening and treating Hypertension with diabetes.

Keywords: Chronic kidney disease, Diabetes, Hypertension, Madagascar, Prevalence

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