Reviewer’s report

Title: Prevalence and risk factors for chronic kidney disease of unknown cause in Malawi: a cross-sectional analysis in a rural and urban population

Version: 0 Date: 11 Apr 2020

Reviewer: Benedicte Stengel

Reviewer's report:

This article reports findings from a cross-sectional survey aiming at identifying individuals with CKD of unknown cause (CKDu) in Malawi. This survey used the standardised Disadvantaged Populations of eGFR Epidemiology (DEGREE) Study developed for estimating the population distribution of estimated glomerular filtration rate (eGFR) in low and middle income countries (LMICs). The study is very well conducted and the paper is well-written. However, it was carried out in the same rural and urban areas, shows the same results, i.e., the non-existence of CKDu in this population, as in the recently published study from Naganka et al (Wellcome Open Res. 2019 Jun 10;4:92.) cited in the introduction. Per se, this study does not appear to provide substantial new insight on CKDu. But, with the implementation of DEGREE studies in different areas, contributing data to a collaborative publication including several countries would be more significant. Below are a few other specific comments.

1 - This study is based on a representative sample of the population, with 5% of the participants older than 60 years of age. The distribution of eGFR shows an extremely high percentage of values > 120 ml/min/1.73 m2, even though no correction was applied for ethnicity, which may reflect issues in using existing equations in the African population. This point is discussed in the study limitations, but may be highlighted as a major problem.

2 - Because only 2 participants had an eGFR 140/90 (i.e., both those with a long hypertension history and those with recently discovered high blood pressure) may result in the exclusion of cases with "advanced" CKDu.

4 - Regarding statistical analyses, given the small number of participants (N=38), adjusting for more than 10 variables in the logistic regression is not appropriate.

5 - This study concludes that CKDu is not common in Malawi, based on the observed low prevalence of eGFR Please confirm that you have included your review in the ‘Comments to Author’ box?

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