Reviewer's report

Title: Chronic Kidney Disease is common in Sickle Cell Disease: a cross-sectional study in the Tema Metropolis, Ghana

Version: 2 Date: 30 December 2014

Reviewer: Vincent Audard

Reviewer’s report:

The authors of this manuscript described in a large cohort of SCD patients from Ghana the prevalence of CKD and proteinuria according to the genotype (SS versus SC). The authors found that 39.2% of patients displayed CKD according to KDIGO 2012 criteria. Some important information and conclusion according to SS and SC genotype are assessed. This extensive description is potentially a useful report, as our understanding of specific renal disease associated to SCD is rather limited.

Major concerns


2. In method section please indicate that CKD-EPI formula has recently been suggested to be the best option to for eGFR evaluation among SCD patients (Arlet JB et al BMC Nephrol 2012)

3. The authors should include the definition and stages of CKD according to KDIGO formula in Method section of the manuscript

4. In method section the authors indicate that “urine proteinuria was quantitatively estimated”. Please add in this section of the manuscript the definition of normo micro or macroalbuminuria according to ACR levels (in mg/mmol or mg/g) (KDIGO criteria and/or Haymann J-P, et al. Clin J Am Soc Nephrol. 2010)

5. In result section and in table 1 could you please specify the number of patients with normo, micro or macroalbuminuria with the accurate levels (+/- SD). It would be of interest to perform statistical analysis according to ACR levels

6. How many patients received anti-hypertensive treatment at the time of renal function evaluation? Please indicate if some patients were treated by usual renal protective measures, including renin-angiotensin–system inhibitors
(angiotensin-converting enzyme (ACE) inhibitor and angiotensin II-receptor blockers (ARB)

7. Did you have some supplementary information concerning previous medical history of these patients? (acute chest syndrome or painful vaso-occlusive crisis requiring hospitalization, other chronic organ damage including dilated cardiomyopathy, cerebral vascular event, leg ulcer, pulmonary hypertension)

8. Concerning eGFR evaluation it would be of interest to specify the number of patients with glomerular hyperfiltration both in children (Becker AM Ped Nephrol 2011) and adult patients according to the definition used by Haymann et al (Haymann J-P, et al. Clin J Am Soc Nephrol. 2010)

9. Some other biological data are lacking (WBC count, reticulocytes, haemoglobin LDH) Did you investigate these laboratory parameters in you daily clinical practice?

Minor concerns

1. In introduction section (line16) please add chronic hemolytic anaemia rather than chronic anaemia

2. Please indicate the number of the reference Ohene – Frempong el al 2008

3. It would be more appropriate in the table 4 to perform statistical analysis between no CKD patients and overall population of CKD patients (including 74 with stage 1 and the two patients with stage 2) rather than compared three groups of patients with only two patients in stage 2 group

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

No competing interests