Reviewer's report

Title: Lower estimated glomerular filtration rates in patients on long term lithium; a comparative study and a meta-analysis of literature

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Reviewer: George Kirov

Reviewer's report:

The authors have tested the kidney function of 47 lithium-treated patients and compared them with controls. The results fit previous reports. It is a pity the authors could not find psychiatric controls, but otherwise they appear to have matched the patients well for age.

Suggested compulsory revisions:

I couldn't see the matching for gender, perhaps I missed that, but it should be done and should be made clear, as gender has a huge effect on eGFR. The Discussion is a bit long and repetitive, it can do with re-writing and concentrating on the main question: lithium’s effect on eGFR. Table 1 should be simplified, we don't need to know that some patients were muslim and we don't need uniformative rows (where everybody scored 0). The paper lacks a figure summarising the distributions of eGFRs in the populations, according to age.gender. There was no attempt to do a multivariate analysis on eGFR while correcting for age, gender, diabetes/hypertension and duration of lithium treatment. A relevant study from 2010 escaped their meta-analysis: Tredget J et al. in the J Affective Disorders.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests'