Reviewer’s report

Title: Long term metabolic and renal outcomes of kidney donors compared to controls with excellent kidney function

Version: 0 Date: 20 Mar 2018

Reviewer: Adnan Sharif

Reviewer's report:

Thank you for the opportunity to review this manuscript from Grupper and colleagues looking at differences in metabolic parameters comparing living kidney donors to healthy and matched controls.

My comments are:

1. Could some further details be provided about the matching methodology as most readers will not be familiar with the SAMPL tool.

2. The metabolic syndrome parameters have been compromised by substituting surrogate factors in (e.g. BMI rather than waist circumference). This has the potential to confound the results and should be acknowledged by the authors in the discussion.

3. Many living donors are also required to lose weight before donation and therefore that may explain the weight gain seen afterwards - this should also be acknowledged.

4. The noted increase in urine ACR is well known among living kidney donors and appropriate counselling already happens with regards to this.

5. Some clarification from a statistical analyst may be warranted for the regression analysis; I'm unclear whether adjusting for BMI is appropriate when the diagnosis of metabolic syndrome already incorporates BMI in its diagnostic criteria.

6. While a decent attempt to find suitable comparison 'healthy' donors has been made, I think it would be appropriate for the authors to acknowledge there will always be limitations in seeking such matched donors. Many potential living kidney donors are screened out after such early investigators based upon advanced tests (e.g. CT KUB,
nuclear medical imaging) and other tests/investigations/reports which matched controls do not have.

7. Is there any smoking data available for the cohorts?

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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