Reviewer's report

Title: Large kidneys predict poor renal outcome in subjects with diabetes and chronic kidney disease

Version: 1 Date: 26 November 2009

Reviewer: Daniel Teta

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V. Rigalleau et al investigated whether kidney size may predict renal outcome in a cohort of patients with diabetes and CKD. Using dialysis has a hard endpoint, they went on to show that large kidney size evaluated initially by ultrasound indeed predicted the need of dialysis after a mean follow-up of 5 years. In a subgroup of patients with CKD 4, the decline in e-GFR was significantly greater in the patients with initially larger kidneys.

The question asked by the authors, although not dramatically original, has not been addressed specifically in the setting of diabetic patients with established CKD (stages 2-4). The investigators have a large experience in the management of CKD patients with diabetes and have made contributions in this setting. The results look interesting at first sight.

However, the study suffers major limitations, not addressed in the discussion.

The following points should be addressed though a major compulsory revision:

1. The study is presented as a prospective study with a baseline (Renal US, isotopic GFR) and a regular follow-up (Care Program) involving diabetologists and nephrologists working together aiming at controlling different targets (diabetes control, blood pressure, etc....). Unfortunately, the reader is left with the impression of a retrospective study with a baseline and a final endpoint about 5 years later. Between these timepoints, there is a blackbox with no data at all. In particular, no indication on well defined predictors of renal outcome such as blood pressure control, use of ACE inhibitors and/or Angiotensin Receptor blockers, levels of albuminuria, HbA1c, lipid control, protein restriction compliance, smoking status.

It is thus uncautious to conclude that large kidneys alone predict poor renal outcome, without the report of these data during the follow-up.

2. Although it is expected that CKD patients were ideally followed in this centre, it is known that the targets achievements (HbA1c, proteinuria < 1 g/24h, blood pressure < 130/80 etc...) are very difficult in these patients. Could the authors provide data on the percentage of patients who reached the targets in each group?

3. The measurement of isotopic GFR has been performed only at baseline. Then, eGFR, according to the Mayo Clinic Quadratic equation, has been used. The
timepoints when eGFR have been estimated are unclear. Could the authors give
more precisions? Could the authors provide a graph with eGFR slopes
according to kidney size?

4. The follow-up length needs to be described more precisely: only the mean
plus/minus SEM is reported. Which is the shorter, respectively longer follow-up?
Start date in June 2001, End date?

5. The authors did not discuss possible implications of their findings. The reader
is left with a contemplative description that large kidney predict poor renal
outcome. So what? Are these finding driving the physicians to induce changes in
their clinical practice: for instance the attempt to reach more demanding targets
such as in the STENO studies?

Minor Essential Revisions

1. Spelling mistakes:
   -Abstract: Methods section: "followed" not "follown"
   -Page 9: last paragraph : "born" in mind, not "borne"

2. Table 2: The stratification of CKD is unclear, please state the stages according
to NHANES III (CKD4, CKD3, CKD1-2)

3. Figure 1: Please state the number of patients at each follow-up endpoints.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a
statistician.

Declaration of competing interests:

I declare that I have no competing interest.