Reviewer's report

Title: Polycystic Kidney Disease in Patients on the Renal Transplant Waiting List: Trends in Hematocrit and Survival

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Reviewer: Dr Rajnish Mehrotra

Level of interest: A paper whose findings are important to those with closely related research interests

Advice on publication: Accept after discretionary revisions

Abbott et al have used the USRDS database to evaluate the risk of death associated with a diagnosis of polycystic kidney disease among individuals with end-stage renal disease who have been placed on the transplant waiting list. Their results demonstrate that patients with polycystic kidney disease have a lower risk of death than patients with other causes of ESRD and this lower risk is independent of a higher hematocrit of the patients. I have a few suggestions and comments to make. I have listed the suggestions in the order in which they appear in the submitted manuscript.

1. It is difficult to ascertain the study design upon reading the abstract. The methods section of the abstract is a single sentence. The authors need to be very clear who these 40,493 patients are. In the results section, the authors should be clear that the data on hematocrit is for incident patients only. The first statement could be interpreted to state that the authors had serial hematocrit data on patients that increased over time.

2. The validity of form 2728 is quite questionable. Published data regarding its validity largely relates to prevalence of previous IHD. The early data suggested a ~25% prevalence of IHD in incident ESRD subjects using the 2728 data. Studies like DMMS 2 showed a prevalence rate of 40%. The authors also argue in the discussion that the accuracy of form 2728 is greatest for CVD but this is not relevant to their observations. Pertinent to their manuscript, it is the accuracy of hematocrit that is most important. The biggest concern is if the hematocrit value is truly just before the first dialysis. Finally, reference numbers 4 and 13 are identical.

3. In the methods section, the authors indicate that they selected patients in whom data was available for calculation of hematocrit. The form 2728 has hematocrit reported on it and the authors should clarify if they used the reported the hematocrit or if they calculated it.

4. In the methods section, the authors indicate that Medicare eligibility begins 90 days after commencement of dialysis therapy for subjects under the age of 65. That does not account for the 90-day waiver that is granted to all individuals that choose home therapies. Thus, the statements are incorrect and need to be modified.

5. The authors need to report the actual mean or median hematocrits reported in Figures 1 and 2. While in Figure 2 it does appear that hematocrit is going up with time, the same cannot be said of Figure 1. More importantly, what is not reported is if the change in hematocrit was significant over time in each of the two groups.
6. Tables 2 and 3 should be combined.
7. The last paragraph dealing with reports regarding the significant findings of Fig. 3 and 4 are confusing. They need to first discuss the results from Fig. 3 and then from Fig. 4.
8. In the first sentence of the discussion, the authors use "chronic kidney disease". The reviewer is aware that the recently published DOQI suggests the use of CKD stage 5 for patients with end-stage renal disease. Hence, the authors should either use CKD stage 5 consistently in the manuscript or use ESRD consistently in the manuscript.
9. Overall style: I think the authors make an interesting point regarding hematocrit and survival for patients on a transplant waiting list. However, the message seems to get lost as authors don't use consistent terminology that would help the reader focussed on the patient population that they are dealing with.

Competing interests:

None declared.