Reviewer’s report

Title: Association between routine and standardized blood pressure measurements and left ventricular hypertrophy among patients on hemodialysis

Version: 1 Date: 2 April 2010

Reviewer: Mahboob Rahman

Reviewer’s report:

Major Compulsory Revisions

This is an interesting paper addressing an issue that has vexed nephrologists for a long time. Which blood pressure should clinicians follow in HD patients?

The use of MRI to define LVH is a strength of this paper. The analyses is carefully done, using appropriate statistical techniques by a group that is one of the best in North America in clinical and epidemiologic research in kidney disease.

However, the main limitation is the lack of novelty of the data, the MRI determination of LVH notwithstanding. As the authors point out, many different studies, particularly from Europe in the 1990s, reported conflicting relationships between pre, post and interdialytic blood pressures. I agree with the authors that recommendations to control BP <140/90 predialysis and 130/90 post dialysis in KDOQI are not based on strong evidence. However, I am not sure that this paper will add substantially to sway the argument one way or the other.

Dr. Agarwal's body of work over the last several years has consistently shown the value of home and ambulatory blood pressure monitoring in predicting outcomes in HD patients. Lack of home or ambulatory blood pressure in this paper is a major limitation.

Finally, the small sample size and cross sectional nature of the data limit the ability to draw firm conclusions.

Minor Essential Revisions

The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

Discretionary Revisions

These are recommendations for improvement which the author can choose to ignore. For example clarifications, data that would be useful but not essential.

Level of interest: An article whose findings are important to those with closely related research interests
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 interests'