Reviewer’s report

Title: Cross-sectional association of volume, blood pressures, and aortic stiffness with left ventricular mass in incident hemodialysis patients: The Predictors of Arrhythmic and Cardiovascular Risk in End-Stage Renal Disease (PACE) study

Version: 2
Date: 11 March 2015
Reviewer: Antonio Bellasi

Reviewer’s report:

Dear editor,

I have read the paper entitled "Cross-sectional association of volume, blood pressures, and aortic stiffness with left ventricular mass in incident hemodialysis patients: The Predictors of Arrhythmic and Cardiovascular Risk in End-Stage Renal Disease (PACE) study". The paper reads well and data adequately evaluated.

Type of study: cross-sectional study

Objective: identify predictors of LVMI in incident to dialysis patients

There are a few areas of concern that should be addressed by authors:

- All parameters were assessed in a non-dialysis day rather than at the end of dialysis (dry weight). Rather than ensuring uniformity, this may result in a greater heterogeneity due to the volume overloading that occurs in the interdialytic time. Stratification for IDWG may not completely overcome this issue. It may be also advisable to adjust the MV model for this variable as a continuous variable.

Data on laboratory as well as treatment were not necessarily collected at the time of blood pressure as well as arterial stiffness assessment but rather derived from patient chart. How was patient treatment adherence assessed?

Can authors provide the readers with further details on the different timing at which BP was assessed?

Volume status assessment: What is the data that support the notion that pulmonary artery pressure is a reliable marker of volume status in incident to dialysis patients? Interdialytic weight was not assessed at the time of blood pressure and pulse wave velocity assessment.

According to recent findings (CAFE study), arterial stiffness is associated with outcome independently of blood pressure in the general population. It seems appropriate to test the association of pulse wave velocity and LV mass adding for systolic blood pressure.

Can authors speculate on the potential explanation of high rather than low diastolic blood pressure association with LVMI? does it mean that arterial
stiffness isn't a predictor of LVMI?

If there is not interaction between ethnicity and LVMI, why authors present their findings stratified by ethnicity?

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

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

none