Reviewer's report

Title: Renal dysfunction, restrictive left ventricular filling pattern and mortality risk in patients admitted with heart failure: A 7-year follow-up study

Version: 2 Date: 15 March 2013

Reviewer: Alberto Palazzuoli

Reviewer's report:

In this paper Schou et al. studied the effect of restrictive diastolic filling pattern evaluated by pulsed doppler echocardiography in a population with HF and Mild to moderate renal dysfunction measured by eGFR. In the results Authors found that restrictive filling did not correlate with outcome in this type of patients, however these findings appear in contrast with other previous paper recently published showing a correlation among renal dysfunction echocardiographic parameters and mortality (Van bommet RJ et al JAm Coll cardil., 2011;57:549-555, Patel RK et al Am J Kidney Dis 2010; 55:1088-96). The reasons of the current discordance could be due to several biases as NYHA class Renal insufficiency degree in the inclusion criteria, but Authors did not discuss these aspects. Again, although the study is original several points need to be addressed:

- echocardiographic methods for restrictive pattern definition are incomplete, authors evaluated only deceleration time and they did not include other important parameters as E wave velocity and time isovolumetric relaxation time, E/a ratio and E/ea. The lack of the current parameters do not permit to have a good echo screening.

- Authors included in their analysis patients with Atrial fibrillation: this is incorrect in evaluating restrictive filling pattern with the used criteria

- even DT time < 140 ms is quite unspecific, in fact the cutoff should be less than 120 msec

- The study in the present form have got other biases linked to lack of HF definition and division (HF with preserved or reduced systolic function, Type of LV hypertrophy, impact of treatment Aceinhibitors and betablocker in primis; at the end Authors cannot include all together patients with NYHA class ranging from II to IV. Authors should perform a statistic analysis measuring all these factors before to gave their conclusions

Minor points:

"in the discussion authors stated that " this is the first study to show that eGFR is associated with mortality risk independent of RF in HF patients" This sentence appears incorrect!

In the reference there are many mistakes regarding Author names and dates

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I have not competing interest