Reviewer's report

Title: Circulating miRNAs reflect early myocardial injury and recovery after heart transplantation

Version: 2 Date: 23 March 2013

Reviewer: Rajamiyer Venkateswaran

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Major Compulsory review:

The authors main objective of this study is to measure and monitor muscle-specific micro-RNA levels in blood and correlate with early myocardial injury and recovery after heart transplantation. Unfortunately, apart from demonstrating increased levels in blood and correlation with CTnI levels, they have failed to correlate micro-RNA levels with clinical outcomes/parameters of myocardial dysfunction.

1. It is well known that elevated donor CTnI levels correlate well with donor heart dysfunction on both haemodynamics and echocardiographic data. Does any of the micro-RNA levels correlate with donor heart function. I advise the authors to look at haemodynamic (CVP, PAWP, Cardiac index etc) and/or donor echocardiographic data to see whether any of these three micro-RNA predict dysfunction better.

2. The levels peak early and slowly fall over the post-operative period-Does any of the parameter correlate or predict graft dysfunction (PGD). Ventilation time and ICU stay although useful are not specific parameters of primary graft dysfunction. I advise authors to look at inotrope requirement, IABP use, iNO requirement as a marker of PGD and correlate with Micr-RNA levels.

3. I note that 2 patients went on ECMO post transplantation. Is it for PGD, if so does any of the parameter predict ECMO requirement.

Minor Comments:

Authors should use common terminology- Cold ischaemic time, Warm Ischaemic time otherwise-Implantation time and these together-Total ischaemic time. I don't understand Aortic clamping time and parallell bypass time please clarify.

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

Quality of written English: Needs some language corrections before being published
Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests: None