Reviewer’s report

Title: The effect of endogenously released glucose, insulin, glucagon-like peptide 1, ghrelin on cardiac output, heart rate, stroke volume, and blood pressure

Version: 1 Date: 23 August 2011

Reviewer: Rosa Sicari

Reviewer’s report:

In the present study authors describe the haemodynamic effects of post-prandial endogenous release of glucose, insulin, GLP-1 and ghrelin and conclude that they significantly affect heart rate, diastolic blood pressure, stroke volume and cardiac output. They conclude that patients should not be evaluated after eating since this condition may affect cardiovascular parameters. Such an influence is more marked in men than in women. Although not highly original, these results may be of clinical interests. There are a few issues that authors should address:

1. In the results section of the abstract there are no numbers. Please add.
2. Please give more details on the patient population under investigation.
3. Data presentation is difficult to follow and most of the results would be better depicted in graph format, such as the correlation between CV parameters and metabolic ones.
4. The main flaw of the present study may be related to the intra and inter-observer variability of the echo measurements. Test and re-test data should be given. In other words, the differences observed may be related to difference in measurement over time. Please address.
5. The tables are difficult to follow and values should be reported in the results section of the manuscript. Please include all values together and then separate on gender basis.
6. The post-prandial glucose, insulin, GLP-1 and ghrelin response paragraph should me moved as first part of results.
7. Use the AUC in graph format for the most significant data
8. Please acknowledge in the discussion section of the manuscript the limited number of healthy subjects studied.
9. Please expand the pathophysiologic mechanisms at the basis of the gender difference observed.
10. The meal effect is well established in the study of endothelial function and fasting state is recommended. Should this recommendation extended to any study having as an endpoint cardiovascular parameters?
11. Due to the nature of the journal it would be important to have sample images.

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:
'I declare that I have no competing interests'