Reviewer's report

Title: Low concentrations of serum testosterone predict acute myocardial infarction in men with type 2 diabetes mellitus

Version: 2

Date: 4 May 2015

Reviewer: Giulia Rastrelli

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The manuscript deals with the role of testosterone as predictor of incident myocardial infarction in a sample of 1109 men and women from general population aged >40 years enrolled in a longitudinal study for a mean follow-up of 14.1 years. The Authors found that men with T in the highest quartile at the study entry had a significantly lower risk of developing AMI during follow-up, particularly if they were diabetic. This association was not significant in either women or non-diabetic men.

The manuscript is well written and the results are interesting. However, few points should be addressed.


Methods: the use of estradiol in men, when it is measured by immunologic methods, is not reliable. Conversely the use of estradiol in women, without information on their phase of cycle or menopause is useless. For these reasons, analyses including estradiol among covariates must be deleted.

Page 5, line 146 must be better specified. Referring to “standard methods” does not give any information on descriptive statistics. Furthermore, the normality or non-normality of distribution of data, information that leads all the statistical analyses, must be verified by the Kolmogorov-Smirnov test. In particular, looking at the data reported in table 1, HOMA-IR and insulin seem not to be normally distributed. Please verify for all the variables used. In table 3 also note that several units of measurement are lacking, the unit of T is incorrect and, when T is expressed as nmol/L, free T should be expressed as nmol/L or pmol/L, too.

Table 3 must be reorganized (maybe changed into a figure?) for clarity, since data as presented in this version are very hard to be read.
Level of interest: An article of importance in its field

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