Reviewer's report

Title: Serum homocysteine levels are decreased in levothyroxine-treated women with autoimmune thyroiditis.

Version: 2 Date: 19 December 2013

Reviewer: Diarmuid Smith

Reviewer's report:

Dear Editor

Thank you for asking me to review this article on "serum homocysteine levels in levothyroxine women". The article was well written and is of interest in its field

Major Compulsory Reviews

1. Include Standard Deviation data for the homosystemeine levels as well as median and interquartile ranges, in the control group there appears to a number of outliers with very high homocysteine levels, please comment.

2. In the discussion I would like the authors to discuss in more detail why they feel they did not see a difference in homocysteine levels between treated and non-treated TPO antibody patients and why there was no difference between non-treated hypothyroid patients and the control group. This would suggest that there is no association between thyroid autoimmunity and atherosclerosis. Yet the authors do not highlight this point in the discussion and the reader is left confused by the conclusion of the author. Therefore I would suggest the 3rd paragraph in the discussion and conclusion section is rewritten and made clearer.

Minor points

1. Did the authors have the baseline TSH levels before treatment in the women who were treated with thyroxine. Did these women have subclinical or overt hypothyroidism? Please include the data.

2. Page 6 line 164 remove the word "for"

Thank you again for asking me to review this article, it is a well performed study but I would suggest the discussion is rewritten so that the authors can be more definitive in their conclusions and discuss the surrounding literature in a more productive fashion.

Yours Sincerely

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

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests