Reviewer's report

Title: Altered thyroid hormone profile in offspring after exposure to high estradiol environment during the first trimester of pregnancy: a cross-sectional study

Version: 2 Date: 27 September 2014

Reviewer: Basil Tarlatzis

Reviewer's report:

Dear Editor

Thank you for the opportunity to review the article by Ping-Ping et al on thyroid function in offspring after IVF. Though an interesting paper, there is a number of major and minor revisions that should be addressed by the authors.

Major Compulsory Revisions

1. Lines 92-93. Why did you examine newborns conceived by fresh ET only? Any conclusion on the advantages of frozen ET cannot be drawn.

2. Why is control group matched only to fresh ET? Again, then no conclusion on frozen ET cycles can be made.

3. Selection bias? Was it a practical sample?

4. Mother with thyroid disease during pregnancy were excluded. Please define. According to existing guidelines the TSH threshold for first trimester is 2.5µ#U/ml. Did women with TSH ranging from 2.6 to 4.5 included as well? (they would have not been diagnosed at that time).

5. The children have different ages and TSH is influenced by age in children. Unless you include children of the same age, no comparisons can be made.

6. Absolute differences are really small among the three groups when it comes to TSH concentrations

Minor revisions

1. Intrauterine estradiol. This does not seem to be the case. The authors use the term "intrauterine estradio" throughout the manuscript, whereas they only measure estradiol in serum.

2. Lines 53-54. Please provide references

3. Lines 64-65. Early screening for thyroid function is already a norm in most countries.

4. Lines 78-83. There is no need to explain basic thyroid physiology.

5. Lines 84-85. Please provide references

Quality of written English: Needs some language corrections before being published
Statistical review: No, the manuscript does not need to be seen by a statistician.