Reviewer’s report

Title: The susceptibility of FSHB G-211G>T and FSHR G-29A, 919A>G, 2039A>G polymorphisms to men infertility: an association study and meta-analysis

Version: 0 Date: 20 Apr 2017

Reviewer: Prabhakar Chalise

Reviewer’s report:

The manuscript entitled "The susceptibility of FSHB G-211T and FSHR G-29A, 919A>G, 2039A>G polymorphisms to men infertility: an association study and meta-analysis" presents prospective observational study in order to explore the association of single nucleotide polymorphisms (SNPs) in FSHB and FSHR with male infertility. All the study subjects, 255 infertile and 340 fertile men, were selected from Han-Chinese ethnicity. Further, the authors have completed meta-analyses combining their study findings with other previously published results. The authors report that although individual SNPs were not associated with male fertility, FSHR GAA haplotype was found to be associated with male fertility. Further, based on meta-analysis, two SNPs in FSHR were reported to be associated with male infertility.

Overall the research question is interesting and can possibly contribute to male infertility research literature. However, the manuscript greatly suffers from the clarity of English language. Also, the description of statistical methods and presentation of analyses results should be improved.

A few comments are listed below.

[1] Major comments

* The language of the manuscript must be clear, correct and unambiguous to meet the standard of the journal. There are numerous errors and it is difficult to understand at some places about what the authors mean. The manuscript must be extensively edited. A few examples of errors are:

i. Page 3, line 5/6, "15% age-couples" should be "15% couples"

ii. Page 3, line 7/8, "causing" should be "caused"

iii. There should be space between word and parentheses throughout the manuscript. e.g. page 3, line 15 "syndrome(KS)", should be "syndrome (KS)"

iv. Page 3, line 56/57, the word "recessive" has been used incorrectly. Recessive is noun or adjective but not verb.
A few words appear together, page 4, line 31/32, "thepromoter" should be "the promoter"

* In page 8, line 17/18, authors state that chi-square test was used to assess the differences in baseline clinical characteristics between case and control groups and the results are presented in Table 1. All of the characteristics presented in the Table 1 are continuous variables. How did the authors use chi-square test? T-test or Wilcoxon rank sum test are the appropriate tests to assess the differences in continuous characteristics between the two groups. But, if the authors had categorized the variables before using chi-square test, they should mention the details in the manuscript.

* Explain the logistic regression model in more detail clarifying what was the response variable used, how the SNPs were coded etc. Based on the results presented in Table 2, it seems that infertility status was regressed with each SNP at a time with SNPs coded as three categories: AA (reference), AG and GG. Then, it is not clear to me why AG/GG (seems like sum of AG and GG) was used as separate covariate. Moreover, I don’t see the rationale behind computing the frequencies of A allele and G allele separately and adding in the model as a covariate without any explanation in the text. Probably, this table can be shortened by including only the results for AA, AG and GG.

[2] Minor comments:

* Resolution of Figure 2 and 3 should be increased. It is hard to read the way it appears now.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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