Reviewer's report

Title: Effects of sex hormones on bronchial reactivity during the menstrual cycle

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Reviewer: Paula Tejera

Reviewer's report:

In the present study, the authors investigate the effect of sex hormones on bronchial reactivity during the menstrual cycle using a cohort of 36 pre-menopausal women. This manuscript is well-written and well-organized, and the results are clearly summarized. However, the study would benefit from a more rigorous description of the study population demographics as well as the statistical methods used. Specific comments are as follows:

Major Comments

1. Study participants demographic characteristics and additional information provided for the participants during the interview at the time of enrollment needs to be summarized in the results section of the manuscript.

2. A description of the statistical analyses carried out by the authors needs to be included in the methods section of the manuscript. Statistical methods used in comparison, covariates included in the statistical models, and statistical power of the study need to be defined in detail.

3. In the results section the authors reported not significant differences in the PC20FEV10 values, LH and PRL plasma levels and ESTR and PGR plasma levels during the follicular and luteinic phases. Could this lack of statistical significance be due to a sample size issue?

Minor comments

1. P values are missing for comparisons in Table 1 and Fig 2-4 and Fig 8.

2. The terms “intermittent asthma” and “persistent asthma” (results section, allergic profile) need to be defined.

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