Reviewer’s report

Title: Investigation of Vaginal Microbial Flora in Women of Different Age Groups Using Hormonal Contraceptives in Pakistan

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Reviewer: Nabil El Aila

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The aim of the study was to find out whether the use of hormonal contraceptives has any effect on microbial flora of the vagina in the contraceptives users in Khairpur Sindh Pakistan. Alteration in vaginal microbial flora can be a significant risk factor for development of UTI. The present study provides important information regarding the vaginal ecology of women using hormonal contraceptives with respect to age.

Major comments:

1- The author mentioned in the results “Vaginal swabs culturing from hormonal contraceptives users in the age group 20-30 years showed statistically insignificant Candida sp (10% samples), and statistically significant (p < 0.05) Staphylococci sp (18% samples), Streptococcus sp (23% samples), E. coli (28% samples) and Lactobacillus sp (32% samples).

The authors didn’t identify Staphylococci and Streptococci at the species level. Coagulase test has been used but the results were not addressed clearly as Coagulase negative Staphylococci. On the other hand, Streptococcus species were not classified, if it is group B Streptococci, Enterococci or others.

2- In materials and methods the author mentioned “Gram stain was performed to identify the isolates using standard microbiological techniques.”

Gram stain is an important tool for studying and following the vaginal microflora of the women. In this study, not much attention has been given to Gram stain. There is different grading systems for vaginal smear like Nugent scoring, Ison and Hay scoring and Modified Ison and Hay by Verhelst el al. 2005. None of these scoring systems has been used to evaluate the Gram stain in this study.

3. The bacterial species which has been detected in this study was Candida sp,
Staphylococci sp, Streptococcus sp, E. coli and Lactobacillus sp.

Other microorganisms should be addressed also in this study which is related to the vaginal microflora like Gardnerella vaginalis and Bacteroid species which includes organisms belonging to the genera Bacteroides, Prevotella, and Porphyromonas.

Minor comments:
1- Under Abstract:
  Background: should be written in one word

2- Under Results and discussion (fourth line)
  Lactobacillus sp should be changed to lactobacillus

3- Under Introduction:
  After “contraceptive use [1, 2] “ there should be a point after [1, 2] .
  The following sentence “Around 17 million women per year in the United States UTI and costs billions to the economy annually [3]” should be rewritten again.

4- Under High vaginal swab collection (sixth line)
  Coma should come directly after Blood agar (Oxoid) and Chocolate agar (Oxiod)

5- Under results (third line)
  A point should be added after G+ve long filamentous rods

6- The references are not written in the format of BMC urology.

Level of interest: An article whose findings are important to those with closely related research interests

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.