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Letter to editor

Are women with PCOS more at risk for endometrial cancer? What approach for such patients?

Khalenko Vladislava Valerievna[1], *Rosa Anna Guiglia*[2], *Marta Alioto*[2]

[1]Saint Petersburg State University, Department of Obstetrics, Gynecology and Reproductology, Saint Petersburg, Russia; [2]AOOR Villa Sofia Cervello, Department of Obstetrics and Gynecology, University of Palermo, Palermo, Italy

To the Editor,

We would like to draw attention to the correlation between policystyc ovarian syndrome (PCOS) and the higher risk of endometrial cancer, as well as the impact of comorbidities, including obesity, and the potential impact of PCOS treatment in that respect.

PCOS is associated with chronic anovulation and unopposed estrogen exposure, which can lead to endometrial hyperplasia and cancer. Additionally, women with PCOS often have higher levels of insulin, which can increase the risk of developing endometrial cancer. Given the lack of clarity in the published literature about the relationship between polycystic ovarian syndrome (PCOS) and endometrial cancer (EC),the aim of this focusing is to refer to the uodated data on endometrial dysfunction in patients with PCOS and its medical and surgery treatments (1,2).

Regarding PCOS treatments currently available research findings point to viable ovarian restoration achievable by insulin sensitizer, such as an inositol supplemetation (3,4). Such an option can be considered a way to reduce the increased EC risks in these particular patients, who often have already tried many IVF techniques (e.g. injection of embryo culture supernatant to the endometrial cavity to get pregnant) (5).

The risk of endometrial cancer has been shown to be between 2 - 6 times higher in women with PCOS, with most adenocarcinomas (> 95%) including Type I and Type II cancers, with type I increased in PCOS. The increased prevalence of EC in PCOS is associated with the absence of the normal course of cyclic monthly morphological changes in the endometrial structure due to chronic anovulation, as well as impaired endometrial sensitivity to major sex steroid hormones (estrogen, progesterone), manifested by the condition of progesterone resistance. Associations between PCOS and endometrial cancer are quite complex and multifaceted. Moreover, comorbid conditions such as obesity, infertility, DM2 and metabolic syndrome are also relevant, whilst PCOS treatment options may influence cancer risk.

Studies have pointed to an association between PCOS and endometrial cancer, however, the results remain inconclusive due to differences in study design, population characteristics, and adjustment for confounders. Age and endometrial thickness may be important predictors of endometrial cancer risk in PCOS patients.

The evidence is therefore still indecisive, and further studies are needed to confirm the association between other insulin sensitizer as metformin that has not demonstrated to have a correlation with endometrial cancer. Letrozole is used as an adjuvant treatment for hormone receptor positive postmenopausal breast cancer and may decrease hormonal related cancer risk but yet to be explored in relation to endometrial cancer, Oral contraceptives reduce risk for endometrial cancer in general populations and effects may be enduring.

Routine screening for endometrial hyperplasia or cancer in PCOS is not indicated, although it is recommended that women with PCOS who are at risk for endometrial hyperplasia or cancer be monitored closely. Risk factors include obesity, long-term use of unopposed estrogen, a family history of endometrial cancer as well prolonged amenorrhea and abnormal

vaginal bleeding. Women who are at high risk according to such factors should have an endometrial biopsy to screen for cancer or hyperplasia.

Fertility sparing surgery treatment is the best proven way in case of diagnosis of malignanices, and especially of EC, to enable such patients to retain their prospects for motherhood (6).

In conclusion, the supposedly higher risk of endometrial cancer in PCOS, which is reflected in various research findings, needs further investigation.

There appears to be an association between PCOS and increased risk of endometrial cancer; however, this risk may be largely due to other factors such as age or endometrial thickness rather than a direct effect of PCOS itself on developing the disease. Larger prospective studies, accounting for other relevant risk factors, are needed to better determine the risk of endometrial cancer in women with PCOS.

Conflict of Interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

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Correspondence:
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Rosa Anna Guiglia, MD
AOOR Villa Sofia Cervello, Department of Obstetrics and Gynecology, University of Palermo,
Palermo, 90146 Italy
E-mail: rosa.anna.guiglia@gmail.com