

## THE USE OF METFORMIN IN PATIENTS WITH POLYCYSTIC OVARY SYNDROME UNDERGOING IN VITRO FERTILIZATION

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Due to potential fertility benefits of metformin, it has become increasingly common for gynecologists to administer or continue metformin therapy in patients with polycystic ovary syndrome undergoing in vitro fertilization. We wanted to examine the effect of metformin in women with polycystic ovary syndrome undergoing in vitro fertilization. Metformin is used in patients with polycystic ovary syndrome, but the findings of its effects on the outcomes of in vitro fertilization have been conflicting. In the present study, which included 123 participants, we compared in vitro fertilization outcomes among women with polycystic ovary syndrome who were or were not given metformin. In patients treated with metformin, the length of stimulation was significantly longer. Further, we found a significantly greater thickness of the endometrium in the group of patients who had co-treatment with metformin. There was not any significant difference in the total dose of gonadotropins, median number of retrieved oocytes, and overall fertilization rates did not differ. Clinical pregnancy rates, missed abortions or multiple pregnancies were equal between the groups. A significant decrease in the incidence of ovarian hyperstimulation syndrome grade I was observed in the group of patients treated with metformin (group with metformin: 5.56% versus group without metformin: 17.39%). While metformin does not improve the outcome of in vitro fertilization in patients with PCOS, its use in patients with PCOS undergoing in vitro fertilization significantly reduces the risk of OHSS Grade I. *Acta Medica Medianae* 2017;56(2): 18-24.

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