Can metformin improve pregnancy outcomes in women with PCOS compared with women only modifying lifestyle?

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Objectives: To observe pregnancy outcomes for polycystic ovary syndrome (PCOS) patients after comprehensive treatment

Patients: 100 PCOS patients, wanting pregnancy, were recruited in the Beijing Obstetrics and Gynecology Hospital, Capital Medical University, between August 2012 and Feb 2014. They signed informed consent to participate in this research project. The patients were divided into a observation group (50 women) and a control group (50 women).

Intervention: In the observation group during 3 months for all patients individualized comprehensive treatment including modifications in lifestyle and Diane-35 was carried out, and metformin (1,000 mg/d) was added in 16 of these patients according fasting glucose >/= 5.6 mol/l. In the control group only modifications in lifestyle were carried out.

Results: Comparing observation group to control group, the basic features have been comparable. The pregnancy rate had no significant difference (p>0.05). In the control group spontaneous abortion appeared in 6 cases, gestational diabetes mellitus in 5 cases and pregnancy induced hypertension in 6 cases. In the observation group spontaneous abortion appeared in 3 cases and no gestational diabetes mellitus and pregnancy induced hypertension events. The difference for the abortion rate was not significant. The incidence of gestational diabetes and pregnancy induced hypertension in the observation group was significantly lower than in the control group (p<0.05).

Conclusion: Comprehensive treatment including modification of lifestyle, Diane 35 and metformin (dependent on fasting glucose) can reduce adverse pregnancy outcomes like spontaneous abortion, gestational diabetes mellitus and pregnancy induced hypertension. If also the pregnancy rate can be increased needs further research.

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