Can metformin reduce the incidence of gestational diabetes mellitus in pregnant women with polycystic ovary syndrome? 
Prospective cohort study

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Abstract

Background. Women with polycystic ovary syndrome (PCOS) are at a high risk to develop Gestational Diabetes mellitus (GDM). We hypothesized that metformin due to its metabolic, endocrine, vascular, and anti-inflammatory effects may reduce the incidence of GDM in PCOS women.

Patient and method. We carried out a prospective cohort study to determine the beneficial effects of metformin on PCOS patients during pregnancy. Three-hundred and sixty non-diabetic PCOS patients were included who were conceived on metformin by different treatment modalities. Two-hundred pregnant women continued on metformin at a dose of 1000–2000 mg daily throughout pregnancy (study group) and 160 women discontinued metformin use at the time of conception (control group).

Results. There is a statistically significant reduction in the incidence of GDM in favor of metformin group (OR: 0.17, 95\% CI: 0.07–0.37). There is a statistically significant reduction in the incidence of pre-eclampsia in favor of metformin group (OR: 0.35, 95\% CI: 0.13–0.94).

Conclusion. Metformin is a promising medication for the prevention or reduction of the incidence of GDM and pre-eclampsia in PCOS women.

Keywords: Metformin, polycystic ovary, gestational diabetes

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