

First trimester testosterone and homa insulin resistance in women with polycystic ovary syndrome: Relationship to gestational diabetes, pre-eclampsia, and premature delivery

Ramesh S. Pandit

The Jewish Hospital, USA

Objective: In women with well documented polycystic ovary syndrome (PCOS), we assessed whether first trimester insulin resistance (IR) and serum testosterone (T) were associated with gestational diabetes (GD), pre-eclampsia (PE), and premature delivery (PD) (<37 weeks). Research design and methods: Prospective study of 160 women with PCOS treated with a low glycemic index (LGI) diet and metformin (2-2.5 g/day) started before and maintained throughout pregnancy, with T and IR measured early in the first trimester.

Results: Of the 160 women, 46 (29%) had ≥ 1 pregnancy complication (GD, PE, PD <37 weeks) and 114 women had no complication. For women having ≥ 1 complication vs no complications, the distribution of T was shifted towards the higher T quintiles, $p=.037$. Mean \pm SD first trimester IR was 4.39 ± 5.00 in women having ≥ 1 pregnancy complication vs 2.59 ± 3.61 in women having no complication, $p=.051$. For women having ≥ 1 complication vs no complications, the distribution of IR was shifted towards the higher IR quintiles, $p=.003$. By stepwise logistic regression, with the dependent variable being ≥ 1 pregnancy complication vs no complications, and explanatory variables race, age, BMI, parity, 1st trimester T and IR, IR was the significant predictor for pregnancy complications, OR 1.10 (95% C 1.009-1.21), $p=.03$.

Conclusions: First trimester IR is independently associated with adverse pregnancy outcome in women with PCOS treated before and throughout pregnancy with LGI diet and metformin. First trimester obstetric risk assessment in women with PCOS should include measurement of IR.

Biography

Ramesh S. Pandit, a medical graduate from B. J. Medical College, Pune, India, is currently working at The Cholesterol Center of The Jewish Hospital under the guidance of the Director, Dr. Charles J. Glueck in Cincinnati, OH, USA.

dr.rameshpandit@gmail.com