RISK FACTORS OF PREECLAMPSIA IN INFERTILE CHINESE WOMEN WITH POLYCYSTIC OVARY SYNDROME

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Objective We aim to explore the risk factors of preeclampsia (PE) before pregnancy in women with polycystic ovary syndrome (PCOS). **Materials and methods** Between January 2010 and December 2014, a prospective cohort study was conducted, enrolling infertile Chinese women with PCOS who got singleton pregnancy by ovulation induction and then were followed up until 6 weeks after delivery. The patients' preconception physical, endocrine and metabolic features were assessed. The morbidity of PE was determined during the pregnancy. Logistic regression analysis and receiver operating characteristic (ROC) analysis were both applied to explore the risk factors. **Results** Fifteen (16.3%) women were diagnosed with PE among the 92 PCOS patients. PCOS women who subsequently developed PE presented a lower level of sex hormone binding globulin (SHBG) and higher weight, body mass index (BMI), area of glucose under the curve (GAUC), insulin level at 120min (INS120) after a 75g glucose tolerance test (OGTT), and free androgen index (FAI) before pregnancy (all P 0.05 after BMI adjusted). Logistic regression analysis showed that preconception SHBG, INS120 levels and BMI were three independent risk factors of PE (OR: 0.981, 95%CI: 0.964-0.998, P =0.027, OR: 1.011, 95% CI: 1.000- 1.021, P = 0.048 and OR: 1.249, 95%CI: 0.992-1.572, P =0.059). Receiver operative characteristic (ROC) analysis identified the predictive value of pre-pregnancy SHBG level, BMI and INS120 for PE (AUC= 0.788, 0.697 and 0.686). **Conclusion** Low SHBG levels, overweight/obesity and hyperinsulinism before pregnancy were strongly correlated with the subsequent development of PE in infertile Chinese women with PCOS.