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EFFECTS OF METFORMIN ON THE BLOOD LIPID PROFILE AND INSULIN SENSITIVITY IN OBESE WOMEN WITH POLYCYSTIC OVARY SYNDROME

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Objectives To evaluate the effects of 3 months of metformin therapy on various blood lipid factors and insulin sensitivity in obese women with PCOS.

Methods Seventeen obese PCOS women (body mass index (BMI) ≥ 24 kg/m²), aged 20–36 years, were included in the study from the department of infertility and sexual medicine at the Third Affiliated Hospital of Sun Yat-Sen University between February 2011 and December 2011. The hormonal and metabolic parameters, including sexual hormone levels, glucose, insulin, and fasting lipids levels, were evaluated before treatment. Metformin (1500 mg/day) was administered for 3 months. After 3 months of therapy, they were resample.

Results BMI were significantly decreased after 3 months of metformin treatment (25.52 ± 3.51 vs 22.45 ± 3.72 , $p < 0.05$). Serum total cholesterol (5.03 ± 0.98 vs 4.70 ± 0.75 , $p < 0.05$), triglycerides (1.81 ± 0.97 vs 1.68 ± 0.78 , $p < 0.05$), and serum testosterone (2.86 ± 0.52 vs 1.76 ± 0.45 , $p < 0.05$) were all reduced. Insulin resistance measured by homeostasis model assessment (HOMA) method was significantly decreased (4.51 ± 0.68 vs 4.01 ± 0.49 , $p < 0.05$).

Conclusions Metformin therapy for 3 months is effective in improving insulin sensitivity and some cardiovascular risk biomarkers in obese women with PCOS.