THE SEVERITY OF THE CARDIOVASCULAR RISK FACTORS AMONG PATIENTS DIAGNOSED WITH POLYCYSTIC OVARY SYNDROME (PCOS)

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Introduction: PCOS is often associated with metabolic disturbances, such as abnormal glucose profile, hyperinsulinemia, and insulin resistance. There are also characteristic lipid disorders. Metabolic disturbances in PCOS may increase a risk of the cardiovascular diseases. The aim of the study was to assess the severity of the traditional risk factors in patients diagnosed with PCOS.

Material and methods: The retrospective research included 3874 patients diagnosed with PCOS using Rotterdam criteria. The control group was composed of 416 eumenorrheic women. The groups were matched according to age (25±5 vs 24±3; p=0.5). Hormones concentration was measured and metabolic state was assessed by oral glucose tolerance test (OGTT), lipid profile, body mass index (BMI) and homeostatic model assessment (HOMA).

Results: Women diagnosed with PCOS had significantly higher BMI (26.3±6.9 vs 23.5±4.9 kg/m2; p<0.01), HOMA (2.47±2.32 vs 1.84±1.15; p<0.01) and serum level of insulin (11.31±8.88 vs 8.75±4.53 uU/ml; p<0.01). The results of OGTT were as follows: there was no significant difference in concentration of fasting glucose but glucose level in 60 minute (158.57±37.60 vs 148.38±39.50 mg/dl; p=0.04) and in 120 minute (125.71±34.40 vs 116.94±27.75 mg/dl; p=0.03) were significantly higher in PCOS patients. Women from study group had significantly higher level of total cholesterol (191.79±36.38 vs 183.46±31.13 mg/dl; p=0.04), triglycerides (116.14±70.60 vs 83.31±33.04 mg/dl; p<0.01) but lower HDL-cholesterol (53.25±13.08 vs 56.94±14.33 mg/dl; p=0.02). They had also higher systolic (116±13 vs 114±12 mmHg; p<0.01) and diastolic blood pressure (73±9 vs 72±9 mmHg; p<0.01).

Conclusions: Traditional cardiovascular risk factors are more severe in patients diagnosed with PCOS. These include lipid disorders, abnormal glucose profile, higher blood pressure and overweight.