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

K. Paczkowska, N. Podkowa, N. Ignaszak, S. Slawek, A. Czyzyk, B. Meczekalski

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.