



LIPID ACCUMULATION PRODUCT (LAP) AND WAIST CIRCUMFERENCE TO HEIGHT RATIO (WGTR) ASSOCIATED WITH HORMONAL PROFILE IN WOMEN WITH PCOS

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Besides endocrinological disturbances, PCOS is also associated with high prevalence of central obesity and metabolic syndrome what increased risk of cardiovascular diseases (CVD). We still don't have a simple and accurate method for the assessment of CVD risk in PCOS in young women. Lipid accumulation product (LAP) is based on the assessment of waist circumference and serum triglycerides and reflects lipid accumulation. Also it was shown that waist circumference to height ratio (WHtR) is a good risk factor for CVD in women. The aim of our study was to assess the utility of LAP and WHtR as new markers of increased risk of CVD in PCOS women. Study group consists of two subpopulations: 161 women with PCOS diagnosed according to the Rotterdam criteria aged 24.7 ± 4.9 and 99 healthy, BMI- and age-matched women (control group). We assessed anthropometric indices of obesity – body mass index (BMI, kg/m²), waist to hip ratio (WHR, cm) and WHtR (waist to height ratio, cm). Lipid profile was assessed using standard laboratory assays. LAP was calculate using formule: waist circumference (cm) – 58 x triglycerides (nmol/l). According to previous data we assumed that optimal cut-off values would be: 34.5 for LAP and 0.5 for WHtR. Mean WHtR value in PCOS group was 0.514 ± 0.101 and was significantly higher than in control group (0.482 ± 0.073). Among women with PCOS 40.96% had WHtR > 0.5 in contrast to 29% in control group. LAP in PCOS group was significantly higher than in control group and was 38.81 ± 41.6 and 19.84 ± 19.44 respectively. Among PCOS women 36.97% had LAP > 34.5 in comparison to 16.16% in control group, p=0,0003. : Our results indicated that WHtR and LAP are accurate indicators for the prediction of developing CVD in PCOS women.

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