

## **PREDICTORS OF METABOLIC DISORDERS AND WAYS OF THEIR CORRECTION IN TERMS OF WOMAN'S LIFE PERIOD.**

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**Objective:** to establish common pathogenetic component of metabolic disorders and to propose the model of their prevention.

**Materials and methods:** The study involved 100 primary care female physicians from one region. The subjects were divided into two groups (50 individuals in each group). Women of childbearing (reproductive) age with no sex hormone dysfunctions were included in group 1. Group 2 consisted of premenopausal women with initial dysfunction of sex hormones (estrogen deficiency) and menstrual irregularities. Baseline parameters were determined: in group 1, average age was 33.5 years, body mass index (BMI) - 22.9 kg/m<sup>2</sup>, waist circumference (WC) - 75.96 cm. In group 2, average age was 48.2 years (hereditary pattern studied showed the average age of menopause in their mothers to be 50.8 years) ( $p < 0.05$ ), BMI - 28.26 kg/m<sup>2</sup>, WC - 87.2 cm. Complex laboratory method, methods of systemic analysis and observation methods were used in the study.

**Results:** BMI in all study female physicians averaged 25.58 kg/m<sup>2</sup>, being lower than that in female population. In group 1, anthropometric, laboratory indices of lipid and carbohydrate metabolism were within normal limits. In group 2, impaired lipid metabolism was detected being manifested as statistically significant moderate increase in lipids of atherogenic fractions (low-density lipoproteins - 3.3 mmol/l, very low-density lipoproteins - 1.2 mmol/l), mild increase in cholesterol - 5.8 mmol/l and triglycerides - 2.55 mmol/l. No significant disorders of carbohydrate metabolism were found. Metabolic disorders in group 2 were caused by decrease in the level of hormone panel (age range between two groups - 15.3 years), more prolonged effect of professional social and psychological factors, which negatively affected the intestinal metabolism as well. There were correlations between disturbances in intestinal microbiota and severity of metabolic disorders. BMI and WC values, being indicative of obesity, inversely correlated with estrogen deficiency of sex hormones. Thus, predictors of metabolic disorders proved to be common pathogenetic component mediated by lipid metabolism, less commonly by carbohydrate metabolism, impaired hormone panel and intestinal microbiota.

**Conclusion:** prophylaxis model of metabolic disorders in women, those in premenopausal stage in particular, should involve prevention of disturbances in lipid metabolism, dysbiosis, lifestyle regulation, proper nutrition and intake of prebiotics and probiotics. Optimized prophylaxis of metabolic disturbances will improve quality of life of primary care female physicians as well as afford opportunity to prevent metabolic disorders in population.