



17. LIPID PROFILE VARIATIONS DURING PREGNANCY

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Introduction. Variations in the maternal lipid profile during pregnancy are an absolutely normal phenomenon, this contributes to good fetal intrauterine development. Hyperlipidemia is appreciated more frequently starting with the 2nd trimester of pregnancy. Also, analyzing the variations of the lipid profile we can relate certain situations during pregnancy such as: gestational diabetes, intrauterine growth restriction, preeclampsia, and other pathological conditions.

Aim of study. The purpose of the study was to determine the variation of the maternal lipid profile, which includes total cholesterol (TC), low-density lipoprotein (LDL), high-density lipoprotein (HDL), and triglycerides (TGs) during pregnancy.

Methods and materials. This is a prospective study with the participation of 50 pregnant women, in which the lipid profile variations were analyzed in each trimester of pregnancy.

Results. Following the tests performed on the women included in the study, we received the following data: for the first trimester of pregnancy, the average value of total cholesterol (TC) was $4,36 \pm 0,51$ mmol/L, for triglycerides (TGs) $1,18 \pm 0,29$ mmol/L, low-density lipoprotein (LDL) $2,38 \pm 0,63$ mmol/L, and for high-density lipoprotein (HDL) the value was $1,7 \pm 0,45$ mmol/L. The concentrations for the 2nd trimester of pregnancy came as follows: TC $4,72 \pm 0,39$ mmol/L, TGs $1,32 \pm 0,17$ mmol/L, LDL $2,63 \pm 0,47$ mmol/L, and the level of HDL was $1,83 \pm 0,35$ mmol/L. Towards the end of pregnancy, in most of the women included in the study, an increase in the level of TC $5,65 \pm 0,43$ mmol/L, TGs $1,7 \pm 0,27$ mmol/L, and LDL $3,4 \pm 0,62$ mmol/L was reported, at the same time a significant decrease in HDL $1,45 \pm 0,47$ mmol/L was detected. Respectively, during the entire pregnancy, an increase in serum concentrations of TC, LDL and TGs was detected, while the amounts of HDL increased from the 1st to the 2nd trimester with a slight decrease in the 3rd trimester.

Conclusion. Although, certain norms for the variation of the maternal lipid profile during pregnancy are not established. When there is a noticeable increase starting with the first trimester of pregnancy, above the normal value established for non-pregnant women in the concentration of total cholesterol, triglycerides, and low-density lipoprotein, most often these pregnancies are complicated with intrauterine growth restriction and gestational hypertension, and in case of consistently lower high-density lipoprotein level with gestational diabetes.

Keywords. Lipid profile; Pregnancy.