THE ASSOCIATIONS BETWEEN EARLY PREGNANCY LIPID PROFILES AND PREGNANCY OUTCOMES

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Objective: To evaluate the association between early pregnancy lipid profiles and pregnancy outcomes. **Study design:** Retrospective six months analysis of 5,218 singleton pregnant women. Their early pregnancy TC, TG, HDL-C and LDL-C levels were divided into quartiles and categorized as low (25th percentile), referent (25 to 75th percentile) or high (75th percentile). T-test, pearson`s chi-square test, logistic regression and multivariate analysis were conducted. **Results:** 1) Women who subsequently developed adverse pregnancy outcomes had higher levels of TC, TG, LDL-C and lower levels of HDL-C during early pregnancy. 2) A trend towards increasing incidence of adverse pregnancy outcomes was noted with increasing levels of TC, TG, LDL-C, and decreasing level of HDL-C. 3) The more numbers of TC, TG, LDL-C above 75th percentile and HDL-C inferior to 25th percentile women had, the higher risk for them to develop adverse pregnancy outcomes. 4) Low TC and low LDL-C played a protective role for women from GDM and preterm birth. High TG, TC, LDL-C and low HDL-C increased the risk of GDM. For PE, high TG was an independent risk factor, while for macrosomia, high LDL-C was an independent risk factor. 5) After adjusting for confounders, early pregnancy TC was independent risk factor for GDM and LGA, TG was independently related to the prevalence of GDM and macrosomia, LDL was significantly associated with the risk of GDM and preterm birth. **Conclusions:** Early pregnancy high levels of TC, TG, LDL-C and low level of HDL-C may be predictive biomarkers for adverse pregnancy outcomes.