

EFFECT OF MATERNAL SERUM TRIGLYCERIDES AND HIGH DENSITY LIPOPROTEIN RATIO ON FETAL MACROSOMIA IN NON DIABETIC PATIENTS

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Introduction

Maternal lipids have a crucial role in fetal growth and development. An abnormal lipid profile is found throughout gestation. This abnormal elevation of maternal plasma lipids has been linked with various adverse outcomes during pregnancy including: fetal macrosomia, gestational hypertension, and preterm birth. Fetal macrosomia is a major public health problem worldwide. Although there is a clear correlation between fetal macrosomia and maternal diabetes mellitus, most of macrosomic infants are born to women without diabetes. The ratio of TGs/HDL is a commonly used marker for lipid disturbance.

Aim of the Work

To study the effect of maternal serum triglycerides and serum high density lipoprotein ratio on fetal macrosomia in non diabetic patients at El-Shatby Maternity University Hospital.

Subjects and Methods

A prospective, case control study was performed from December 2021 to May 2022 on 160 pregnant women at EL-Shatby Maternity University Hospital who were admitted for delivery. Patients were divided into two groups, Group (A): 80 cases with macrosomic fetus, Group (B): 80 cases with average sized fetus.

The two groups were matched according to the characteristics that included: age, obstetric history, mode of delivery, maternal prepregnancy BMI, weight at delivery, maternal serum TG / HDL ratio, estimated fetal weight and neonatal birth weight.

Results

In our study, a strong positive correlation was found between neonatal birth weight and TG/HDL ratio in cases groups where correlation coefficient was ($R = 0.725$) and there was moderate correlation in control group where correlation coefficient was ($R = 0.395$) where P value was less than 0.05.

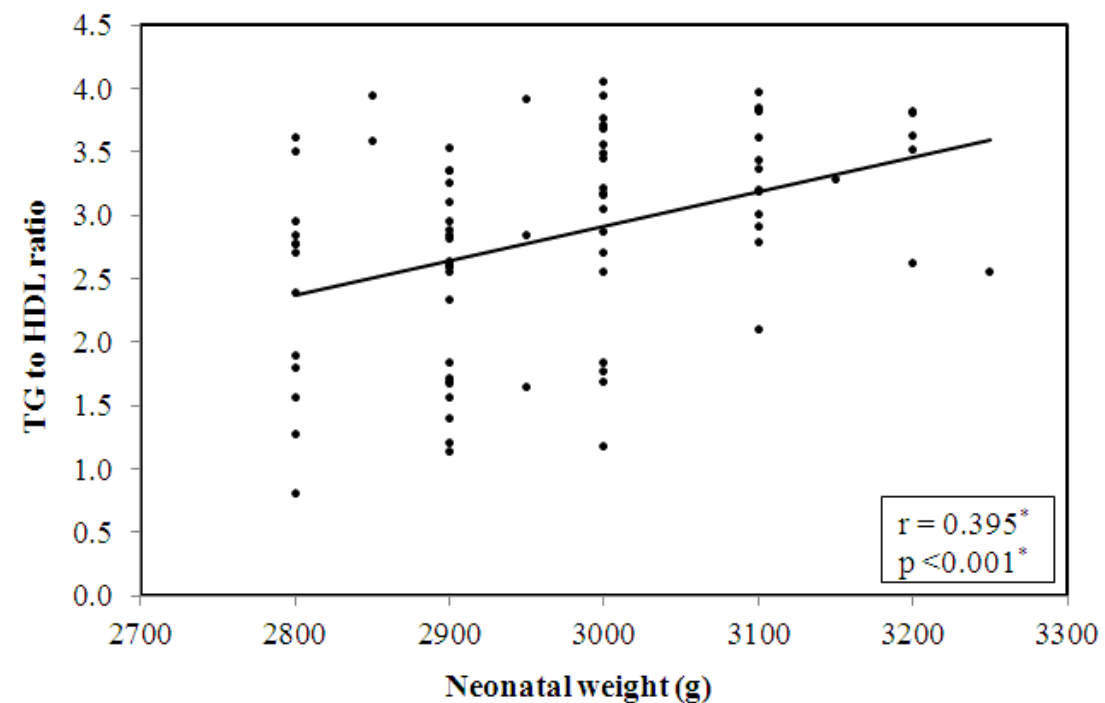


Figure 1: Correlation between TG to HDL ratio and Neonatal weight in case group

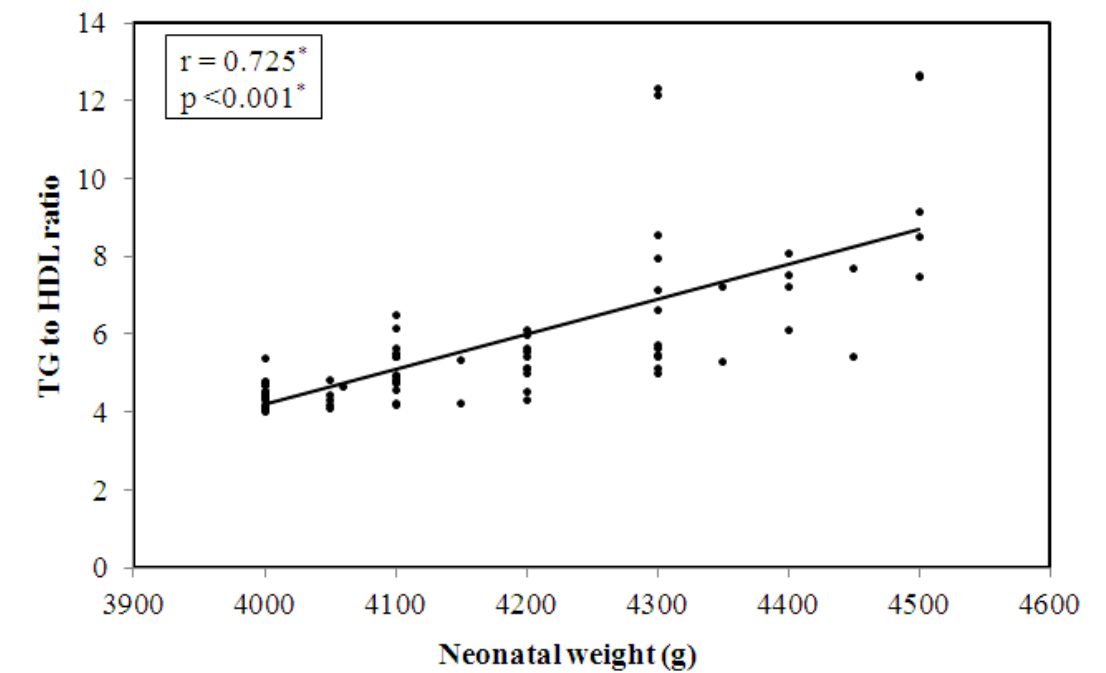


Figure 2: Correlation between TG to HDL ratio and Neonatal weight in control group

Conclusion

We concluded that high serum TG concentrations and serum TG\HDL ratio at late gestation were associated with an increased risk of fetal macrosomia in non-diabetic women.