



Lipid Ratios with Hepatic Steatosis and Liver Fibrosis in Non-Alcoholic Fatty Liver Disease Patients

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DESCRIPTION

Non-Alcoholic Fatty Liver Disease (NAFLD) is the most common chronic ailment of the liver, and it is made up of a number of clinical disorders, from simple liver steatosis to Hepatocellular carcinoma, liver fibrosis, cirrhosis, and Non-alcoholic Steatohepatitis (NASH). With the rise in living standards and quick changes in lifestyle, China has experienced an unanticipated rapid rise in the burden of NAFLD within a short period of time, with a prevalence of 29.2%. Furthermore, China will experience the fastest increase in the incidence of NAFLD, with 314.58 million cases predicted to occur there by 2030, posing a serious clinical burden and public health issue.

Additionally to being the primary factor in liver-related morbidity and mortality, mounting research has revealed that NAFLD is intimately linked to metabolic syndrome and type 2 diabetes (T2DM) Lipid abnormalities, such as High-Density Lipoprotein Cholesterol (HDL-C), Triglycerides (TG), and non-HDL-C, are frequently associated with and present with NAFLD. Recent years have seen the notion of lipid ratios total cholesterol (TC)/HDL-C and TG/HDL-C proposed as potential biomarkers for predicting Insulin Resistance (IR), which is a major factor in the pathophysiology of NAFLD. The relationships between TC/HDL-C, TG/HDL-C, and NAFLD have been extensively described in light of this notion. For example, a cross-sectional, retrospective investigation found that persons with individually or jointly greater TC/HDL-C or TG/HDL-C ratios had a higher risk of developing NAFLD, especially in more advanced stages of the disease.

Another study using data from a Chinese community population showed that TG/HDL-C had an independent relationship with NAFLD in people who appeared to be in good health and could be used as a stand-in for NAFLD. Despite

being the gold standard for diagnosing NASH and its associated progressive fibrosis, liver biopsy's clinical use is constrained by its intrusion and high expense. Transient Elastography (TE), a non-invasive method, was frequently used in various studies to assess the prognosis steatosis grades in NAFLD patients in accordance with the Ultrasound Attenuated Parameter (UAP). The stages of fibrosis development have also been determined using the Liver Stiffness Measurement (LSM). Despite this, the information describing the relationship between the lipid ratios and the degree of hepatic steatosis and the appearance of liver fibrosis in NAFLD are less. The purpose of this study is to investigate the aforementioned problem.

Additionally, the predictive value of the lipid ratios is compared to that of the commonly used lipid markers of TC, Low-Density Lipoprotein Cholesterol (LDL-C), TG, and HDL-C. In a sizable cohort study, they for the first time showed a correlation between the lipid ratios and the severity of NAFLD and the existence of liver fibrosis assessed by transient elastography. It's significant that this study revealed the key finding of a positive association between TG/HDL-C and the degree of hepatic steatosis and the prevalence of liver fibrosis in the group of persons who appeared to be in good health. In contrast to other lipid ratios like TC/HDL-C, TG/HDL-C may be a better biomarker for NAFLD, albeit it may not be. According to the findings presented here, lipid ratios, particularly TG/HDL-C, are strongly associated with a higher risk of hepatic steatosis severity and liver fibrosis in NAFLD. This study demonstrates the potential utility of TG/HDL-C as a biomarker for NAFLD. Given the potential importance of TG/HDL-C to public health, it's crucial to monitor individuals whose levels are high. In particular, TG/HDL-C levels over 1.08 indicate that lifestyle changes are required to prevent developing NAFLD in the future.

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