The role of serum triglyceride and non-high-density lipoprotein cholesterol levels in predicting cardiovascular risk

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Cardiovascular disease (CVD) is a significant cause of death worldwide, especially in developed countries, such as Indonesia. Non-high-density lipoprotein cholesterol (Non-HDLC) is an important lipid profile parameter to assess cardiovascular risk that could serve as an additional screening tool along with low density lipoprotein cholesterol (LDLC) and triglyceride (TG). Although this parameter has a lot of advantages, it is rarely used by general practitioners in lipid profile assessment. This cross-sectional study was carried out from 730 patients during January to December 2017. The relationship between serum lipids and the risk for cardiovascular disease was determined by dividing the lipid profiles into two groups stratified by the levels of non-HDLC and LDLC. The cut-off value was 1.13 mmol/L for TG. Analysis of 730 lipid profiles showed that 506 (69.32%) patients had triglyceride levels above 1.13 mmol/L. Of these, 6.99% of the samples showed high non-HDLC with normal LDLC while 3.15% showed high LDLC with normal non-HDLC. Total serum Triglycerides and the TG/HDL ratio were significantly higher in the high non-HDLC groups for both males and females. Thus, TG and non-HDLC are more recommended than LDLC as predictors of cardiovascular disease risk factors based on this study. Therefore, it is recommended that Non-HDLC be added as part of lipid profile parameter and TG/HDL ratio be recognized as a possible important indicator of cardiovascular risk.

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