

The Cut-Off Value of TG/HDL Ratio of High Pericardial Adipose Tissue

Authors : Nam-Seok Joo, Da-Eun Jung, Beom-Hee Choi

Abstract : Background and Objectives: Recently, the triglyceride/high-density lipoprotein cholesterol (TG/HDL) ratio and pericardial adipose tissue (PAT) has gained attention as an indicator related to metabolic syndrome (MS). To date, there has been no research on the relationship between TG/HDL and PAT, we aimed to investigate the association between the TG/HDL and PAT. Methods: In this cross-sectional study, we investigated 627 patients who underwent coronary multidetector computed tomography and metabolic parameters. We divided subjects into two groups according to the cut-off PAT volume associated with MS, which is 142.2 cm³, and we compared metabolic parameters between those groups. We divided the TG/HDL ratio into tertiles according to Log(TG/HDL) and compared PAT-related parameters by analysis of variance. Finally, we applied logistic regression analysis to obtain the odds ratio of high PAT (PAT volume \geq 142.2 cm³) in each tertile, and we performed receiver operating characteristic (ROC) analysis to get the cut-off of TG/HDL ratio according to high PAT. Results: The mean TG/ HDL ratio of the high PAT volume group was 3.6, and TG/ HDL ratio had a strong positive correlation with various metabolic parameters. In addition, in the Log (TG/HDL) tertile groups, the higher tertile had more metabolic derangements, including PAT, and showed higher odds ratios of having high PAT (OR=4.10 in the second tertile group and OR=5.06 in their third tertile group, respectively) after age, sex, smoking adjustments. TG/HDL ratio according to the having increased PAT by ROC curve showed 1.918 (p < 0.001). Conclusion: TG/HDL ratio and high PAT volume have a significant positive correlation, and higher TG/HDL ratio showed high PAT. The cut-off value of the TG/HDL ratio was 1.918 to have a high PAT.

Keywords : triglyceride, high-density lipoprotein, pericardial adipose tissue, cut-off value

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