

Assessment of Triglyceride to High-density Lipoprotein Ratio as an Indicator of Coronary Artery Disease

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Abstract:

Introduction: Increased ratio of Triglyceride (TG)/ High-density Lipoprotein (HDL) has been known as an accompanying finding in conditions like obesity and metabolic syndrome. Therefore, the aim of this study was to assess the utility of the TG/HDL ratio as a diagnostic tool for the assessment of coronary artery disease (CAD).

Methods: This study was conducted at a semi-private hospital Karachi; patients above 15 years of age and undergone angiography or PCI were included. Patients with Congenital Heart Disease and familial hyperlipidemia were excluded. TG/HDL ratio was obtained for all patients, the severity of the disease was classified as normal, mild to moderate, moderate to severe, and very severe based on coronary angiography. Analysis of variance was applied to assess significant differences in the mean TG/HDL ratio among the severity of the disease. P-value<0.05 was considered significant.

Results: A total of 2,212 CAD patients were reviewed out of which 1613 (72.9%) were male and 599 (27.1%) were female. The average age of the patients was 55.12 years (\pm SD=9.93). Of these 2212 patients, 533 (24.1%) had very severe disease, 1213 (54.8%) had moderate to severe disease, 258 (11.7%) had mild to moderate disease, and 208 (9.4%) were normal. A Significant and an increasing trend was observed in the TG/HDL ratio with the severity of disease ($p=0.0001$) Statistically significant difference was observed in the TG/HDL ratio of patients with mild to moderate, moderate to severe, and very severe disease from normal patients. However, no statistically significant difference was seen in the TG/HDL ratio between the patients with moderate to severe and very severe disease.

Conclusions: A positive relationship between Triglyceride to HDL ratio and the severity of coronary artery disease was observed. Therefore, TG/HDL ratio can be used as an indicator of the severity of coronary artery disease in addition to other parameters of lipid profile.



Biography:

Dr. Naveed has completed his MBBS at the age of 25 years from Liaquat University of Medical Health Sciences, Jamshoro Hyderabad, Pakistan, and postgraduate studies from the National Institute of Cardiovascular Diseases Karachi. He is the Clinical Fellow of Adult Cardiology. He is also a certified BLS and ACLS Instructor from AHA in the College of Physicians and Surgeons in Pakistan.

Speaker Publications:

1. " Radial or Femoral Access in Primary Percutaneous Coronary Intervention (PCI): Does the Choice Matters?", May 2020.
- 2." Time to think beyond door to balloon time: significance of total ischemic time in patients with st elevation myocardial infarction", Journal of the American College of Cardiology, March 2019.
- 3." Comparison of outcomes of different balloon sets in patients undergoing percutaneous transvenous mitral commissurotomy", European Heart Journal 34(suppl1) :P5389-P5389, August 2013, DOI: 10.1093/eurheartj/eh310.P5389

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