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Association of Plasma Apolipoprotein E Level with Lipid Profile in Patients with Coronary Artery Disease

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Background and objectives: Apolipoprotein E has promising antiatherogenic effect by removing TG-rich lipoproteins from the circulation to prevent the development of coronary artery disease. This study was aimed to find out the association of plasma apoE level with lipid profile in patients with coronary artery disease.

Materials and Methods: This was cross sectional comparative study in which 40 CAD patients and 33 people without CAD were included. The participants were from age of 36 to 84 years, including both sexes. Plasma apolipoprotein E levels were determined by ELISA method and lipid profiles were determined by enzymatic method.

Results: This study showed CAD patients had significant lower apoE and HDL-C levels with higher TG and TC levels compared to normal group. Among all lipid profile, plasma TG level showed significant association ($p<0.05$) with apoE level in CAD group only which means plasma apoE apparently has more prominent role in metabolism of TG-rich lipoproteins in CAD patients than in normal people.

Conclusion: Plasma apoE level is only associated with TG level in patients with CAD and plasma TG is currently accepted as an independent risk factor if CAD. So, plasma apoE level has potential role in using as an alternate predictor of CAD.