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Elevated level of sTLT1 is associated with risk prediction in acute coronary syndrome

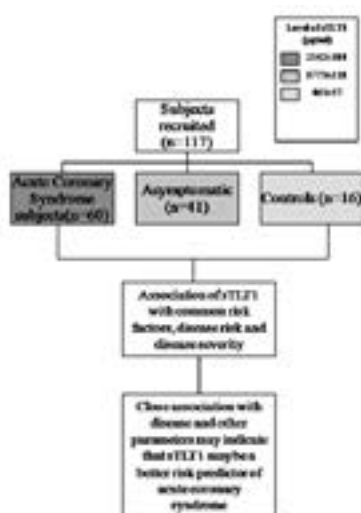
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Statement of the Problem: Soluble TREM like transcript 1 (sTLT1) is reported to be associated with major processes related to atherosclerosis and Acute Coronary Syndrome. Hence, our study aimed to determine the association of sTLT1 with Coronary Heart Disease and its ability to predict the risk in the aforementioned disease.

Methodology: 117 subjects with or without Acute Coronary Syndrome were enrolled and plasma levels of soluble TREM like Transcript 1, NT-proBNP, oxidized LDL and other cholesterols were estimated. Subclinical cases were identified by lipid profiling, electrocardiogram and echocardiography. Regression analysis and ROC analysis were performed to determine the predictive value of this protein.

Findings: sTLT1 level was significantly ($p < 0.05$) higher in ACS subjects and asymptomatic than that of control subjects. The level of sTLT1 was not only associated with common risk factors of ACS in both patient and asymptomatic groups but also correlated with disease severity and it was also significantly associated (1338 ± 375 pg/ml) with intima-media thickness in asymptomatic individuals (> 1 mm). Cut-off values of sTLT1 were found to be 875 pg/ml and 2500 pg/ml in asymptomatic and ACS subjects respectively, as revealed by Receiver operating characteristic (ROC) curve analysis. Multiple linear and logistic regression analysis revealed that sTLT1 level would independently predict ACS as it is significantly associated (Linear Regression: $P < 0.0001$, $r = 0.674$) (Logistic Regression: $P = 0.045$, OR=1.02, 95% CI=1 to 1.04) with disease risk.

Conclusion & Significance: Circulating sTLT1 represents a promising candidate for risk prediction in asymptomatic as well as ACS subjects which may reduce mortality rate by leading better prognosis.



Biography

Apabrita Ayan Das is working on Cardiovascular Biology. He had pursued his MSc from Banaras Hindu University. Currently, he is pursuing his PhD under Dr. Arun Bandyopadhyay in CSIR-Indian Institute of Chemical Biology, India. His research is mainly focused on identifying novel prognostic and diagnostic marker for acute coronary syndrome and elucidates their role in coronary heart disease.

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