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Alterations in serum levels of TPA and PAI-1 in patients with acute myocardial infarction

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Intravenous tissue plasminogen activator (TPA) infusion is one of the effective therapeutic approaches for acute myocardial infarction (AMI). Plasminogen activator inhibitor-1 (PAI-1) functions as a principal inhibitor of TPA and hence counteracts fibrinolysis. The overall fibrinolytic activity is mainly determined by the balance between TPA and PAI-1 levels. Considering the important role of these biomarkers in thrombotic pathway, we determined the levels of TPA and PAI-1 in sera of 50 AMI patients, 100 patients with associated risk factors and 100 healthy controls. Our results showed significantly higher levels of both TPA and PAI-1 in sera of AMI patients whereas the risk group patients (dyslipidemia and hypertension) showed only non-significant increases as compared with control group. Both these markers were not correlated with body mass index (BMI) however TPA showed significant correlation with age and PAI-1 with systolic blood pressure. In conclusion, a combination of these markers could provide a useful tool to assess the prognosis of AMI.

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