TRANSFER- AMI	Trial of Routine ANgioplasty and Stenting after Fibrinolysis to Enhance Reperfusion in Acute Myocardial Infarction
TXA2	Thromboxane A2
UA	Uric Acid
UFH	Unfractionated heparin
URL	Upper Reference Limit
VLDL	Very low-density lipoprotein

INTRODUCTION

Rapid restoration of infarct related arterial flow is associated with improved ventricular performance and lower mortality among patients with myocardial infarction ***(Kaya MG et al., 2007)***. However, poor arterial flow and no-reflow phenomena may limit the benefits of recanalization of the IRA ***(Ito H et al., 1996)***.

Several biomarkers are associated with poorer outcomes in ST-elevation myocardial infarction (STEMI). Uric acid, the end product of purine metabolism in circulation, is an independent risk factor for cardiovascular disease but the underlying pathophysiology is not clear. The relationship

between circulatory uric acid levels and endothelial dysfunction has been demonstrated previously *(Many A et al., 1996; Kato M et al., 2005; Erdogan D et al., 2005)*. It has been shown that coronary flow reserve, a marker of coronary microvascular function, is significantly greater in participants with lower serum uric acid concentrations *(Erdogan D et al., 2006)*. It has been also demonstrated that high serum uric acid level is associated with slow coronary flow in patients underwent elective angiography *(Yildiz A et al., 2007)*.

Uric acid has been shown as a predictor and an independent risk factor for cardiovascular events and is also an independent risk factor for coronary heart disease *(Freedman DS et al., 1995; Culleton BF et al., 1999)*, but little is known regarding the association of uric acid levels with coronary blood flow in the setting of STEMI.

Mean platelet volume (MPV) is an easily measured platelet indices, which increase during platelet activation *(Yarlioglues M et al., 2010)*. Furthermore, increased MPV levels have been associated with poor clinical outcome in survivors of myocardial infarction *(Huczek Z et al., 2005)* and higher MPV correlates with thrombolysis failure in patients presenting with STEMI treated with thrombolytic therapy *(Pereg D et al., 2010)*.

C-reactive protein (CRP) is an acute phase protein and several studies have shown that CRP may have prognostic value in patients with acute coronary syndromes and undergoing percutaneous coronary intervention *(Magadle R et al., 2004; Tomoda H et al., 2000; Celik T et al., 2005; Hong YG et al., 2009)*.

Given that elevated serum levels of these biomarkers are associated with poorer flow during elective angiography, we hypothesized that elevated levels would be associated with impaired flow and perfusion in the setting of ST elevation myocardial infarction treated with primary percutaneous coronary intervention.