**RISK FACTOR ANALYSIS FOR PATIENTS WITH SLOW CORONARY FLOW**

**M. Katsnelson**1, M. Bhalja2, J. Diez3

1Baylor College of Medicine, Houston, TX, USA

2Tulane University, New Orleans, LA, USA

3Baylor St. Luke's Medical Center, Houston, TX, USA

**Introduction:**Slow coronary flow (SCF) phenomenon is a coronary microvascular disorder characterized by the delayed passage of angiographic contrast in the absence of obstructive coronary artery disease. Many patients presenting with SCF suffer from angina-like chest pain and present for angiography procedures after documented positive cardiac stress tests. Although the clinical and pathological features of SCF have been previously described, the etiology of this phenomenon remains unclear. Understanding the risk factors underlying SCF would provide the foundation for further exploration of the role of microvascular and endothelial dysfunction in coronary artery disease.

**Objective:**We sought to investigate the risk factors for slow coronary artery flow in a population of 160 patients at a large academic medical center.

**Methods:**A retrospective review of 160 patients with documented slow coronary flow as defined by high TIMI frame count (TFC) was performed. Clinical information was collected.

**Results:**The risk factor analysis of 160 patients with SCF demonstrated the presence of active smoking in 39 (24.38%), hyperlipidemia in 80 (50%), diabetes in 17 (10.6%), and hypertension in 124 (77.5%). The mean TFC for this population was 40.04±1.66. The mean TFC following administration of the vasodilator adenosine was 19.54±1.92.

**Conclusions:**In the absence of obstructive coronary artery disease, the chest pain described by patients and the corresponding abnormalities observed on non-invasive stress tests can be associated with the presence of slow-flow phenomenon as determined by TFC. This slow-flow is strongly associated with the presence of hypertension and hyperlipidemia in this patient population. Our demonstration that the TFC in patients with SCF improves upon the administration of adenosine suggests a microvascular component playing a role in the etiology of coronary artery disease.