and endothelium-dependent vasodilation reduced (5.6±5.3 vs 15.7±14.7%, p<0.001) compared to controls. Furthermore, a significant correlation was found between endothelium-dependent vasodilation and serum CRP levels in the whole population of subjects (r=0.38, p<0.05), with a tendency to a correlation in the group of SX patients (r=0.44, p=0.006) but not in controls (r=0.19, p=0.549), separately. No differences were observed in endothelium-independent vasodilation results between SX patients and controls (19.5±9.5 vs 19.8±5.9%, respectively, p=0.98). The vasodilator response to nitroglycerin was also not significantly correlated to serum CRP levels both in the whole population of subjects (r=0.15, p=0.44) and in syndrome X patients (r=0.37, p=0.15) and in controls (r=0.11, p=0.74), separately.

Coronary heart disease confirms the presence of peripheral endothelial dysfunction and of higher serum CRP values in SX patients. There was, however, only a tendency to a correlation between CRP levels and flow-mediated vasodilation, suggesting that other mechanisms may contribute to endothelial dysfunction in these patients.

Methods: Thirty-three patients with uncomplicated AMI who underwent an emergency PCI were enrolled. Use of high-resolution ultrasound, FMD and nitroglycerin-mediated dilation (NMD) of the brachial artery were measured at 10 days and 3 months after the onset of AMI. These patients divided into 3 groups. Group I, FMD > 3% in both study and follow-up (n=10, Group II, FMD > 3% in study other than study n=14, Group III, FMD < 3% in both study n=19). Follow-up angiography was performed to assess restenosis.

Results: There were no significant differences in affection fraction, baseline hemodynamic variables and NMD among the three groups. 13 of the 33 patients had angiographic restenosis > 75%. Restenosis rate was similar in Group I and group II. However, the restenosis rate in Group III was significantly higher than in Group I (11% vs 79%, p < 0.05).

Conclusions: The sustaining fall of FMD increase the restenosis rate. Peripheral endothelial function may predict coronary restenosis in AMI patients treated by primary PCI.

918 The effect of levosimendan on endothelial function in patients with chronic heart failure
S. Araji 1, A. Karavidas 2, D. Konos 2, E. Matassakas 2, A. Zacharoulis 2, I. Fotiadis 3, K. Papadopoulos 1, A. Zacharakis 2, Athens, Greece, 2Athens General Hospital, Athens, Greece

Objective: Abnormalities in endothelium-dependent, flow-mediated dilation (FMD)may be assessed noninvasively in the brachial artery by high frequency ultrasound. Levosimendan is a calcium sensitizer with both a positive inotropic effect and a vasodilating effect, exerted on these arteries. The aim of this study was to evaluate the effect of Levosimendan on Endothelial Function in patients with Chronic Heart Failure (CHF).

Methods: The study population included 12 in-hospital patients (10 males, mean age 62 ± 11.4 years) with decompenated CHF, in NYHA functional class III-IV and Left Ventricular Ejection Fraction (LVEF) <50%. All patients were receiving optimal medical treatment prior to their hospitalization. In all, FMD of brachial artery was studied by noninvasive ultrasound, before and 2 days after a 24h i.v. infusion of Levosimendan.

Results: The baseline brachial artery diameter was 4.67 ± 0.63mm before and 4.97 ± 0.70mm after reactive hyperemia. Following Levosimendan infusion, there was a nonsignificant increase of the brachial artery diameter at rest (4.74 ± 0.61mm vs 4.97 ± 0.71mm after Levosimendan infusion, p=0.27), as well as after reactive hyperemia (5.05 ± 0.62mm, p=0.77). However, FMD as a percentage (%) increased significantly from 6.29 ± 2.59% before to 7.36 ± 5.23% after Levosimendan infusion (p=0.04). The FMD absolute value also increase significantly from 0.30 ± 0.13mm before to 0.34 ± 0.15mm after the infusion, while nitrate induced dilation did not significantly change (5.25 ± 0.02mm before, 5.31 ± 0.60mm after, p=0.19, percentage values:12.69 ± 6.69% before, 12.90 ± 5.94% after p=1.0).

Conclusions: Our data suggest that Levosimendan infusion has a favourable effect on endothelial function in patients with CHF, and optimal medical treatment. Further studies are due to throw more light on the role of Levosimendan on endothelial function in CHF patients.

919 Endothelial function in patients with type 2 diabetes mellitus
R. Rudlo, T. Przewlocki1, A. Kablak-Ziemba2, W. Traczyck, K. Krakow, Poland, 2Institute of Cardiology, Dep. of Cardiac and Vascular Diseases, Cracow, Poland

Objective: Patients with type 2 diabetes mellitus have greater incidence of coronary artery disease. Therefore, the aim of the study was to examine whether Levosimendan infusion has a favourable effect on endothelial function in patients with type 2 diabetes mellitus.

Methods: We studied 69 patients with type 2 diabetes mellitus aged 61±8.1 years. We assessed endothelial function on the basis of the relative dilation of brachial artery (%) after its 5 minutes occlusion (flow-mediated dilation - FMD) by high-resolution ultrasound imaging. Just before ultrasound examination, we evaluated fasting glycerol, insulinemia, glycated hemoglobin level, glycation end products level (thiobarbituric method), lipids level, fibrinogen level, TNF-α level (high sensitivity method), C-reactive protein level (high sensitivity method) and blood pressure. Insulin resistance was estimated by homeostasis model assessment of insulin resistance (HOMA-IR) according to the formulas: fasting insulin (μU/ml) x fasting glucose (mmol/l)/22.5. Statistical correlation between examined factors and flow-mediated dilation was analyzed.

Results: Statistically significant correlation between FMD (13.05±5.25%) and glycated hemoglobin level (9.46±9.73%) (p<0.001, r = -0.58), glycation products level (119.4±122.5) (p=0.018, r = -0.37), insulin resistance (7.66±8.7) (p=0.005, r = -0.34), fasting glycerol (150.5±10.9) (p=0.005, r = -0.43) and triglyceride level (175±142mg/dl) (p=0.001, r = -0.29).

Conclusions: These preliminary data suggest that endothelial dysfunction in patients with type 2 diabetes mellitus is associated not only with increased insulin resistance and triglyceride level but also with elevated glycerol which may be connected with intensified glycation process in these patients.