

## **Circulating Stromelysin-1 as a Biological Marker of Cardiovascular Remodeling in Obesity Patients after Q-wave Myocardial Infarction**

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### **Background:**

Not all obesity patients after myocardial infarction with chronic heart failure respond to conventionally treatment (CT) equally. Traditionally, NT-pro-brain natriuretic peptide (BNP) variations could be useful in predicting the therapeutic efficacy of CT. However, it has been considered some limitations for predicting value of NT-pro-BNP concentrations among obesity patients population. Circulating stromelysin-1 has been proposed as a possible marker of severity of cardiovascular remodeling and survival after myocardial infarction.

### **Aim:**

To evaluate value for 6 months survival of circulating stromelysin-1 plasma level in comparison to NT-pro-BNP concentration in obesity patients with chronic heart failure after myocardial infarction.

### **Methods:**

68 patients (52 male, 46-62 aged) after Q-wave myocardial infarction with mild-to-moderate chronic heart failure (CHF) and left ventricular ejection fraction (LVEF) less 50% were studied prospectively for 6 months regarding survival. Both circulating stromelysin-1 plasma levels and NT-pro-BNP were measured at the study entry by ELISA.

### **Results:**

Myocardial infarction subjects were divided into groups according to whether (n=29) or not (n=39) they appeared conventional obesity criteria. LVEF and mean value of NYHA functional class of CHF were similar in both groups. Six month survival rate was 86.2 % and 87.1% for both group subjects respectively. However, the mean NT-pro-BNP plasma levels were significantly lower in dead patients with obesity in comparison to subjects without of one. At the same time, circulating stromelysin-1 plasma levels in both dead group patients not only were the same, but the values were significantly lower in survival subjects independently they appeared obesity criteria.

### **Conclusions:**

We proposed that circulating stromelysin-1 plasma level might have more predicting value in comparison with traditionally measured NT-pro-BNP concentration among obesity population after myocardial infarction.