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Relationship between insulin like growth factor-i and endostatin with the severity of coronary artery disease

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THE AIM OF THE STUDY: Determine the interaction between insulin like growth factor-I (IGF-I) and endostatin with the severity of coronary artery disease in patients with acute myocardial infarction (MI) depending on the presence of concomitant obesity.

MATERIALS AND METHODS: 30 patients with MI were enrolled in the study (average age 66.4 ± 5.1 years), 12 of them with concomitant obesity. The control group consisted of 20 healthy persons. These groups were equivalent by sex and age. MI was diagnosed according to ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation (2017). Obesity was diagnosed according to guidelines of American association of clinical endocrinologists and American college of endocrinology for patients with obesity (2016). All patients underwent angiography of the vessels of the heart.

RESULTS: However, patients with MI and obesity tended to have a higher total degree of coronary artery disease compared to patients with MI without obesity, but this difference did not reach statistical significance (p> 0.05). The total number of affected arteries in patients with MI with or without comorbid obesity did not differ significantly (p> 0.05). The study determined the correlation between IGF-I and endostatin with the severity of coronary artery disease (Syntax scale). In patients with MI and concomitant obesity, there was a significant direct relationship between IGF-I (r = 0.42; p <0.05), endostatin (r = 0.51; p <0.05) and the number of affected coronary arteries. A similar picture was observed in patients with MI in the absence of obesity – a direct significant relationship between IGF-I (r = 0.55; p <0.05), endostatin (r = 0.53; p <0.05) and the number of affected coronary arteries.

CONCLUSIONS: The study found significant relationship between IGF-I, endostatin and the number of affected coronary arteries in patients with MI and obesity or without it.