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THE STUDY OF MMP-13, TIMP-4 AND TENASCIN C IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION WITH TYPE 2 DIABETES MELLITUS AFTER PERCUTANEOUS CORONARY INTERVENTION

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The aim: to determine the parameters of the intercellular matrix in patients with acute myocardial infarction (AMI) in the presence of type 2 diabetes mellitus (DM) before and after percutaneous coronary intervention.

Materials and methods of research. The study involved 110 patients with AMI with type 2 diabetes. Patients were divided into 2 groups. The first group underwent percutaneous intervention, the second group did not perform this intervention. For determine of matrix metalloproteinase-13 (MMP-13), tissue inhibitor of metalloproteinase-4 (TIMP-4) and tenascin C was used ELISA.

The research result. In the first group of patients, the level of MMP-13 decreased by 35% compared to 1-2 days ($p=0.0424$); the level of TIMP-4 increased by 30% compared to 1-2 days ($p=0.0019$); the content of tenascin C increased by 25% compared to 1-2 days ($p=0.0080$). In the second group, the content of MMP-13, on the contrary, increased by 20% compared to 1-2 days ($p=0.0001$); the level of TIMP-4 increased by 34% compared to 1-2 days ($p=0.0001$); the content of tenascin C decreased by 29% compared to 1-2 days ($p=0.0001$).

The conclusion. Thus, in patients with AMI and type 2 DM after percutaneous intervention, the destruction of the activity of the collagen degradation marker MMP-13 was determined. In particular, the indicators of TIMP-4 and tenascin C increased in patients with AMI and type 2 DM under percutaneous coronary intervention. In the second group of patients, a decrease in tenascin C levels and an increase in TIMP-4 levels were determined.