

## PREDICTING COMPLICATIONS IN PERCUTANEOUS CORONARY INTERVENTION

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**Abstract.** Overall mortality after percutaneous coronary interventions ranges from 0.4 up to 1.9%. Among patients with acute coronary syndrome, in-hospital mortality rates for percutaneous coronary interventions are significantly higher and amount to 5-7%. Despite the constant improvement of the technology of percutaneous coronary interventions, the problem of their complications still remains extremely relevant. However, complications that arise in the early or late postoperative periods significantly reduce their clinical effectiveness.

**Key words:** echocardiography, myocardial infarction, coronary artery

**The purpose of the study:** analysis of correlations between the results of ultrasound examinations and complications during percutaneous coronary intervention in patients with coronary heart disease.

**Material and methods.** The study included 30 patients with coronary heart disease of functional class 2, stenting of the coronary arteries was performed as planned. The control points of the study were hospitalization, after 6 and 12 months, 5 years after surgery.

Myocardial echocardiography was performed using a Philips device. This device performed duplex scanning of the great vessels of the head from the purpose of studying the structural and functional state of the vascular wall and analyzing correlations with dissection coronary arteries (usually against the background calcification) that occurs at the time of stenting.

**Results.** Analysis of variance of quantitative echocardiography parameters revealed the presence of statistically significant differences between groups in such indicators as end-diastolic volume (EDV), ejection fraction (EF), left atrium size and aortic diameter, left ventricular end-systolic and diastolic dimensions. The dimensions of the right atrium ranged from 2.4-5.5 mm to 2.8-6.9 mm. Patients of group VII had the largest sizes of the right atrium (with fatal outcome within 1 year after the intervention) – by 8.2- 11.3% ( $p < 0.05$ ) more than in the group without complications. A tendency towards a decrease in the size of the right atrium was noted in groups with intraoperative complications: rhythm disturbance (V) and “no-reflow” syndrome (VI), however, there are no statistically significant differences discovered. The maximum stroke volume was also recorded in patients of group VII – 12.3% more ( $p = 0.25$ ) than in the group without complications. Smallest stroke volume observed in a group of patients

with thrombosis coronary stent in the early postoperative period – 9.1% less ( $p=0.35$ ), than in the group without complications.

**Conclusion.** Correlations have been identified between ultrasound examination indicators and the risk of developing intraoperative, early and late postoperative complications during planned stenting of the coronary vessels of the heart. The most significant predictors complications are: ejection fraction, end-diastolic volume, aortic diameter, end-systolic size of the left ventricle.

#### References:

1. Сравнительные результаты использования различных устройств для гемостаза у больных после чрескожных эндоваскулярных вмешательств, выполненных трансфеморальным способом / И.М. Губенко [и др.] // Материалы V Всероссийского съезда интервенционных кардиоангиологов. – 2013. – № 34. – С. 40
2. Прогнозирование риска рестеноза коронарных артерий после их стентирования у пациентов с ожирением / Н.Г. Веселовская [и др.] // Сердце. – 2013. – Т. 12, № 5. – С. 305-310.

