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ASSOCIATION OF ENDOCAN LEVEL AND OBESITY WITH THE DEVELOPMENT OF CARDIOVASCULAR EVENTS

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Abstract

Background. Obesity and endothelial dysfunction are associated with the development of atherosclerosis and cardiovascular events.

The aim of this study was to investigate the level of a marker of endothelial dysfunction of the endocan and the presence of obesity in predicting future cardiovascular events.

Design and method. Prospective population-based cohort study of 223 subjects without a previous cardiovascular event. The follow-up period was 48 months (from August-September 2014 to November 2018). The clinical endpoint was the composite of myocardial infarction, invasively treated stable / unstable ischemic heart disease, stroke, or all-cause mortality. During the 4-year follow-up period, 35 (15.7%) of respondents had a composite endpoint. The average age is 51.8 (25-65) years, 46 for men, 177 for women.

Results. Comparative analysis showed significant differences between the groups in BMI ($p = 0.014$), WC ($p = 0.038$), endocan ($p = 0.017$), age ($p = 0.001$); we did not find significant differences in cholesterol ($p = 0.55$), glucose ($p = 0.13$), gender ($p = 0.72$). According to binary regression analysis, both endocan (hazard ratio 2.5, 95% CI: 1.14–5.76, $p=0.02$) and obesity (hazard ratio 4.2, 95% CI: 1.3–13.4, $p=0.01$) persisted as significant predictors of the outcome

Conclusion. These data indicate that endothelial dysfunction and obesity play an essential role in the development of the CV event.

Keywords: endothelial dysfunction, cardiovascular events, endocan, obesity

Abbreviations: CV (Cardiovascular), BMI (Body Mass Index), WC (waist circumference)

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