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Level of cardiovascular biomarkers depending on cardiovascular risk factor

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Statement of the Problem: Cardiovascular Diseases (CVD) is primary cause of mortality and morbidity in the whole world. Early detection of cardiovascular diseases and detection of patients with high level of development of adverse effects will allow timely prevention of serious consequences or death. Consequently, search of sensitive biomarkers is crucial task. The aim is to study level of troponin, N-terminal pro-brain natriuretic peptide (NT-ProBNP), CK-MB and Fatty Acid-Binding Protein, cardiac form (H-FABP) depending on common risk factors of cardiovascular events.

Method: Screening was performed among population of Karagandinskaya oblast. Sampling is composed of 1,240 people (852 women, 352 men) at the age from 18 to 65 years old (average age is 53.2±9.4 years). Level of markers was studied in groups depending on degree of cardiovascular risk according to scale Score with low (less 1%), medium (1-5%), high (5%-10%) and very high (10% and more).

Result: Results testify that significant differences in H-FABP level were detected in respondents with different level of cardiovascular risk, depending on level of cardiovascular risk (Z=45, 44; p=0.0001), the lowest level is in group with low risk (1756 pg/ml), the highest level is in group with high and very high risk (2443 pg/ml). It was established during analysis of markers level depending on risk factors, that H-FABP level was different depending on age (p=0.0001), on body mass index and waist measurement (p=0.001), on level of blood pressure (p=0.0001), presence of hypercholesterolemia (p=0.001), in persons with heart attack (p=0.013). NT-ProBNP level was significantly higher among people with heart attack (p=0.006), with abdominal obesity (p=0.015), increased systolic blood pressure (p=0.022).

Conclusion: Combination of high cardiovascular risk with increase of titer H-FABP is indicative of diagnostic and prognostic value of this marker among population.

Biography

Botagoz Baidildina is currently a Master's Student Research Scientist. She is also an Assistant Professor of Therapeutic Disciplines, Karaganda State Medical University. She is the author of several publications in Russian and foreign journals. Her interest is in diagnostic and prognostic value of biomarkers in the development of cardiovascular disease.

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