

УДК 616.12–008.331.1-082

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PRIMARY PREVENTION OF ARTERIAL HYPERTENSION

Annotation. Numerous studies of cardiovascular diseases from the perspective of the cardiovascular continuum indicate the leading role of the imbalance of the neurohumoral system in favor of the increased activity of its sympatho-adrenal and angiotensin-adrenal components. Methods for assessing these vital regulators are very diverse, each of them has its own advantages and disadvantages.

Key words: arterial hypertension, primary prevention, cardiovascular disease.

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ПЕРВИЧНАЯ ПРОФИЛАКТИКА АРТЕРИАЛЬНОЙ ГИПЕРТЕНЗИИ

Аннотация. Многочисленные исследования кардиоваскулярных заболеваний с позиции сердечно-сосудистого континуума свидетельствуют о ведущей роли дисбаланса нейрогуморальной системы в пользу повышенной активности симпато-адреналовой и ангиотензин-адреналовой ее составляющих. Методы оценки этих жизненно важных регуляторов весьма разнообразны, каждый из них имеет свои преимущества и недостатки.

Ключевые слова: артериальная гипертензия, первичная профилактика, кардиоваскулярная заболевания.

Relevance. One of the most important problems of modern cardiology is arterial hypertension (AH), which is combined with a high frequency of various complications, is the cause of mortality and disability of the adult population worldwide [4,8]. Due to the intensive study of the theoretical and practical aspects of hypertension, the emergence of new methodological approaches to its treatment, as well as the introduction of educational and information programs, there is a tendency to improve the prognosis and quality of life of patients [1,6].

The sympatho-adrenal system is an important integral regulatory system, since it acts as a link between the central nervous system and peripheral organs. One of the main effector organs of this system is the heart, since among all peripheral organs, the heart has the highest density of sympathetic innervation and, accordingly, the highest concentration of the main mediator of the sympathetic nervous system - norepinephrine. As a result of these structural and functional features, the heart finds itself in the center of influence of both emotional and physical stresses constantly experienced by a person during his life [3,7].

Based on the ideas of a direct relationship between the severity of immunological reactions and the functional state of the sympatho-adrenal system, it is logical to assume that the lack of pronounced activation of this

system after the introduction of tumor cells is due to the weak immunogenicity of the latter, and the decrease in the tone of the system in subsequent periods of tumor growth is due to the specifics of the tumor process.

Such changes in the activity of the sympatho-adrenal system can affect the state of antitumor immunity and cause its failure [2,5]. In Western countries, the prevalence of AG is 25-35% of the population. Over the age of 60, the proportion of people with MS is 42-43.5%. In general, approximately 47 million citizens in the United States suffer from it [3]. The total number of adults suffering from the syndrome was estimated at 22%, while the level of somatic distress among people aged 20-29 years was 6.7%, among 60-year-olds - 43.5%. The prevalence of hypertension among men is 24%, among women – 23.4% [2,4].

The purpose of the study. To reduce the prevalence of arterial hypertension and risk factors, morbidity with temporary disability in an organized population by introducing a primary prevention program based on dietary restriction of table salt.

Research materials and methods. Screening examination of men and women aged 25-49 from among workers and employees was conducted at industrial enterprises. The average age was 39.1 ± 6.8 years in the main group and 39.0 ± 7.1 years in comparison.

The results of the study. At the beginning of the studied date range (2018), out of the studied cohort of patients (62 people as of 2019), only 17 individuals had an established diagnosis of hypertension and were under dispensary supervision. However, in some patients, the quality of medical care was not evaluated due to the insufficient completeness of the clinical data available in the primary documentation. The coverage of the studied cohort of patients with clinical indicators varied significantly over the years, by 2019. The completeness of data in outpatient charts for all clinical parameters necessary for calculating indicators was sufficient in 72.6–87.1% of patients. Prior to this,

insufficient data was noted primarily for evaluating measures to control the level of physical activity, smoking and cholesterol. The most complete information on blood pressure control and nutrition was reflected in the maps for the period from 2018 to 2019. The increase in the completeness of filling out medical records is primarily due to appropriate measures to improve the quality of medical care (especially starting in 2020).

The results of calculating clinical indicators in the studied cohort of patients with hypertension for 2018-2019 are shown in Fig. 1-6. For almost the entire period from 2018 to 2019, the implementation of measures to control the level of physical activity (Fig. 2), smoking, weight and nutrition was at a good level. However, if we evaluate the overall effectiveness of these measures, then they can be considered effective in most patients only for physical activity (most patients had a sufficient level of physical activity during all years).

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The remaining measures were somewhat less effective: by 2018-2020, the proportion of smokers increased slightly; the proportion of overweight people practically did not decrease during the entire period, despite the ongoing educational work; the vast majority of patients with hypertension continued to eat irrationally, despite explanations on the specifics of the diet for hypertension. Cholesterol control and blood pressure control remain key "problematic" components of medical care for patients with hypertension in the CMR.

The results of the work are of practical importance for clarifying the features of catecholamine metabolism in connection with malnutrition and inactivity in the genesis of atherosclerosis, coronary heart disease, obesity and other metabolic diseases. The dependence of the functional state of the sympatho-adrenal system on the nature of incoming food can be the basis for the prevention of the above diseases.

Conclusion. To increase the effectiveness of mass preventive examinations, a short questionnaire and a tactical examination algorithm for the detection of cardiovascular diseases have been developed and implemented. The three-group system of medical examination of the population has been supplemented with specific recommendations for the prevention of early forms of hypertension and FR.

It was found that dietary intervention with sodium chloride restriction for three years significantly improves hemodynamic parameters, taste sensitivity to salt among people with early forms of hypertension and risk factors, does not cause side effects, and does not require significant material costs.

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