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Preventive measures for arterial hypertension risk factors among medical staff of Feofaniya Clinical Hospital of State Management of Affairs

L. Hordienko

Feofaniya Clinical Hospital of State Management of Affairs, Kyiv, Ukraine

O. Perepadya

Head of The Prevential Medicine Center of State Management of Affairs, Kyiv, Ukraine

W. Zukow

Department of Spatial Management and Tourism, Faculty of Earth Sciences, Nicolaus Copernicus University in Torun, Torun, Poland

Summary. Researches conducted in different departments of Feofaniya Clinical Hospital in recent 5 years suggest extremely wide prevalence of arterial hypertension. According to the data of the representative extract survey the age-standardized prevalence of arterial hypertension at the hospital is 39.9% among men and 41.1% among women.

Key words: cardiovascular diseases, arterial hypertension, ischemic heart disease, somatotype.

Research relevance. It is known that arterial hypertension (AHT) in the structure of general morbidity and mortality occupies one of the leading positions. About 25% of the world's adult population suffers from AHT, the global hypertension involvement in the world is to increase to 1.5 billion people in 2025 (World Health Organization, 2011). 7.6 million cases of premature deaths (about 13.5% out of total cases), 54% of strokes and 47% of events caused by ischemic heart disease develop due to high blood pressure (BP) (V. Kovalenko, 2013).

In Ukraine, there are almost 12 million hypertensive people that is up to 30% of the adult population. Unfortunately, only 60% of people are aware of the presence of high BP, 50% out of them stick to medical treatment during one month, only 14% of the AHT patients follow permanent treatment regimen. In addition to significant cardiovascular events and urinary tract complications, AHT causes premature senescence and cognitive decline; it is a comorbidity associated with obesity, diabetes and atherosclerosis (I. Horbas with the co-author, 2010).

In the structure of cardiovascular diseases arterial hypertension (AHT) ranks high as it leads to serious complications, contributes to the development of cerebrovascular accident (CVA) and ischemic heart disease (IHD) that often results in disability and mortality of the population.

AHT is one of the most common cardiovascular diseases in Ukraine and in the whole world. In 30-40% of Ukrainian adult population blood pressure exceeds 140/90 mmHg. This is due to the fact that AHT in many respects causes high cardiovascular morbidity and mortality; it is characterized by substantial prevalence and, at the same time, the lack of adequate control at a population scale. Even in countries with high-level healthcare outcomes this figure does not exceed 25-27% while in Ukraine only 5.7% in men and 17.5% in women have adequately controlled blood pressure (BP). The severeness of AHT lies in the fact that quite often it is not clinically apparent and leads to the development of significant cardiovascular events - ischemic heart disease, cerebrovascular accident, premature disability and life expectancy decline.

Epidemiological researches conducted in different departments of Feofaniya Clinical Hospital in recent 5 years suggest extremely wide AHT involvement. According to the data of the representative extract survey the age-standardized prevalence of arterial hypertension at the hospital is 39.9% among men and 41.1% among women. 37.1% of men and 58.9% of women are aware of their disease presence, 21.6% of men and 45.7% of women are medically treated, and only 5.7% of men and 17.5% of women get effective treatment. However, these values vary greatly depending on the department they work at. It is concluded that AHT is the most frequently registered in the departments of anesthesiology and neurology.

Hypertension prevalence among young people is of particular concern. They are poorly informed about the disease presence or do not attach importance to AHT. Blood pressure control of the working-age population is considered to be one of the key links in the system of preventive measures carried out in relation to major cardiovascular diseases.

The incidence of AHT among village residents is recorded with steadily increasing frequency. In Kyiv oblast it occurs in 30% of men and 38-41% of women among village residents in the age group of 35-60 years.

Similar work is carried out among medical staff in the age group of 20-59 years. AHT is found in 34.2% of the surveyed who work at night.

However, despite the abundance of publications on the AHT prevalence among the population only a few researches are devoted to this problem among medical staff. The prevalence of hypertension and its risk factors among medical staff of Feofaniya Clinical Hospital is studied for the first time.

Research Aim. Set out the system of preventive measures for the prevalence of arterial hypertension risk factors and life quality according to different somatotypes and psychological profiles of the medical staff cohort of Feofaniya Clinical Hospital.

Research Objectives.

1. To Identify the prevalence of hypertension and its risk factors among Feofaniya Clinical Hospital medical staff who have different somatotypes.
2. To study the commitment of medical workers to medical pharmacotherapy, its regularity and effectiveness.
3. To research psychological peculiarities of Feofaniya Clinical Hospital medical staff depending on the levels of blood pressure and somatotype.
4. To determine the influence of socio-psychological maladaptation on life quality of the patients with AHT among medical workers.

Scientific Novelty. The prevalence of hypertension is studied for the first time and stratification of risk factors for cardiovascular disease among urban population is conducted; Feofaniya Clinical Hospital medical staff adherence to antihypertensive therapy and its effectiveness is studied.

For the first time, somatotype extension of the organized population of medical workers is surveyed and specific gravity of arterial hypertension prevalence in each somatotype with frequency partition of risk factors is determined.

For the first time, urban population psychological peculiarities of Feofaniya Clinical Hospital medical staff and their influence on life quality are examined, frequency of socio-psychological maladaptation is revealed.

The system of preventive measures for AHT among medical workers is developed in terms of anthropometric values, the frequency of risk factors occurrence and peculiarities of psychological status.

Results and Discussion. Heart, vessel, kidney and brain involvements head the list of AHT complications. To reduce the number of patients with arterial hypertension and its complicated forms, improve their life quality and prevent risk factors (RF) of this pathology special national measures are required. Currently three strategies of preventive measures are distinguished: population, high risk and secondary prevention.

The study includes 101 doctors out of whom 21 subjects are women (21,21%) and 80 subjects are men (80.8%). Mean age of the medical staff is 47. Doctors' working experience is 5-10 years. In the group of employed individuals 19 subjects (19,19%) suffer from AHT, out of these 14 (14,14%) are men and 5 (5,05%) are women. Stage 1 hypertension is found in 13 cases (13,13%), out of these 2 (2.02%) are women and 11 (11,11%) are men. 6 individuals (6.06%) have stage 2 hypertension that is equally found among men (3 cases, 3,03%) and women (3 cases, 3,03%).

The success of individual prevention depends on timely detection of people with RF and the introduction of preventive treatment. Secondary prevention is to identify individuals with early stages of the disease and to conduct medical and preventive treatment (S. Armesto et al., 2007). Taking into consideration significant prevalence of cardiovascular diseases population strategy should have a dominant role, but due to socio-political and economic factors in Ukraine its implementation in most cases is superficial and inconsistent. That is why at the regional level the most popular and available preventive strategies are healthy lifestyle, high-risk strategy (preventive medical examination) and secondary prevention (medical treatment).

Polish program "Sopkard" developed by scientists at Gdańsk Medical Academy and based on the experience of Swedish colleagues can be considered the example of individual prevention. The essence of the program is a long (for 10 years) preventive intervention aimed at 40- and 50-year-old residents focused on timely detection of AHT, diabetes and hypercholesterolemia, implementation of measures for primary and secondary prevention of cardiovascular diseases (S. Boitsov, 2012).

North Karelia Project was introduced in Finland. Within 20 years of project implementation the average blood cholesterol values in the population decreased by 13%, AHT values declined by 9%, propensity for tobacco use lowered by 15%. Over the course of the study mortality from CHD among men dropped by 68%, from lung cancer by 71% and total mortality by 49%; life expectancy for this period increased by 10 years. In Ukraine life expectancy in 1970 exceeded the indicated values in Finland, in 1991 the average value in Ukraine was 6 years less than that in Finland in 2007.

Preventive programs in the above-mentioned countries were designed for 10-20 years. Implementation of health development programs in these countries consisted of two components: formation of healthy lifestyle and development of primary medical assistance with the priorities for the preventive component of health care.

One of the most major problems with implementation strategies was to provide provide a background for healthy lifestyle of the population (Table 1).

Table 1.

Over the last two years

Subscale	Low Level		Moderate Level		High Level	
	2016	2017	2016	2017	2016	2017
Emotional exhaustion	54	64	27	23	20	14
Depersonalization	73	82	116	111	11	77
Reduction of personal achievements	55	66	32	27	14	88

Conclusions

1. Data on AHT prevalence is necessary for planning of measures for secondary prevention of cardiovascular diseases.

2. The obtained data on the prevalence of risk factors in the population of medical staff is essential for planning of measures for primary AHT prevention.

3. Psychological testing data of hypertensive patients determine patients' life quality.

4. The prevalence of arterial hypertension and risk factors both among medical staff and unorganized population is quite high accompanied with low awareness on the disease and poor treatment effectiveness.

5. High values of SMOL test in hypertensive patients on the scale of neurotic triad (1, 2, 3), 6 (paranoia), 7 (psychasthenia) and 8 (schizoid) are combined with strongly marked decline in the quality of life.

6. Megalosomal somatotype is the predictor of arterial hypertension development among medical staff.

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Профилактические мероприятия факторов риска артериальной гипертензией у медицинских работников клинической больницы «Феофания» Государственного управления делами

Резюме. Исследования проведены в различных отделениях КБ «Феофания» в течение последних 5 лет, свидетельствуют о чрезвычайно широкую распространенность артериальной гипертензии. По данным обследования репрезентативной выборки, стандартизированная по возрасту распространенность артериальной гипертензии в КБ «Феофания» составляет среди мужчин 39,9%, а среди женщин 41,1%.

Ключевые слова: сердечно-сосудистые заболевания, артериальная гипертензия, ишемическая болезнь сердца, соматотип.

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