EARLY DIAGNOSIS OF ARTERIAL HYPERTENSION IN THE YOUNG POPULATION AND ITS IMPACT ON HEALTH

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Abstract: The health status of young people as a significant social group in society is not only an indicator of the country's socio-economic and social development, but also an important indicator of the labor, economic, cultural, and defense potential of society. Despite significant advances in medicine, the growth of the cultural level and awareness of the population, there are persistent unfavorable trends in health status. Therefore, it is important to know how the health of young people is formed, what factors it depends on, and how these factors can be influenced to achieve positive results.

Key words: prevalence, arterial hypertension, prevention, health status, risk factors.

Relevance: The prevalence of arterial hypertension in economically developed countries is 20-50% and is one of the main factors of disability and mortality of the population. At the same time, the continued rise in incidence and the prevalence of cardiovascular disease among increasingly younger people makes it a major medical and social problem. Arterial hypertension is a serious public health problem due to the continued increase in its prevalence and the lack of adequate control. Arterial hypertension is often called a "silent" killer. It's a killer because it leads to myocardial infarction and stroke, heart failure, and kidney failure. It's a silent one because most people with hypertension don't complain or seek medical attention. These patients have moderately elevated blood pressure, which is discovered incidentally during routine examinations [1]. At the end of the 20th century, two significant events occurred in medicine that would determine the fate of many patients for many years to come. Our understanding of arterial hypertension (AH) has been revolutionized. First, we've learned that there's no such thing as a "working" pressure; second, it's become clear that elevated blood pressure doesn't always manifest as a headache. It turned out that most cases of high blood pressure are asymptomatic. This means that the prevalence of hypertension is significantly higher than previously thought, and that even healthy people who do not complain of anything need to measure their blood pressure more often in order to detect hypertension as early as possible [2]. Hypertension (synonyms: essential arterial hypertension, primary arterial hypertension) is a disease of the cardiovascular system that develops as a result of primary dysfunction of the higher

vasoregulatory centers and the subsequent activation of neurohormonal (hypothalamic) and renal mechanisms. In this case, the increase in blood pressure is not caused by the body's natural reactions to certain physiological situations, but is a consequence of an imbalance in the systems that regulate blood pressure. The insidiousness of the disease is that it can proceed unnoticed by the patient [3,4]. Arterial hypertension (AH) is a syndrome of increased systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg.

Hypertension (HT) is a chronic disease, the main manifestation of which is an increase in blood pressure, not associated with the identification of obvious causes leading to the development of secondary forms of hypertension (symptomatic hypertension). The term "hypertension", proposed by G. F. Lang in 1948, corresponds to the terms "essential hypertension" and "arterial hypertension" used abroad. Hypertension is the most common form of hypertension, with its prevalence exceeding 90% [5,6]. The term "hypertensive crisis" ("hypertensive emergency") To date, only life-threatening target organ damage has been described. Treatment tactics (rate of blood pressure reduction, choice of drug, patient monitoring) depend on the specific complication [7,8]. Currently, the problem of cardiovascular diseases is widespread. Moreover, arterial hypertension not only carries a high risk of complications, but also affects the psychological component and the physical condition of the patient, and accordingly, the quality of life of patients with hypertension deteriorates to a certain extent. It has been established that patients suffering from arterial hypertension have a reduced quality of life, including patients with combined pathology [9,10]. Arterial hypertension is a widespread disease throughout the world. In economically developed countries of the world, the incidence rate is on average 20-30%, and in the age group over 50 years – 60-65%. It is well known that the problem of early diagnosis, prevention, and treatment of arterial hypertension, the most common non-communicable disease, is becoming a threat, shortening life expectancy, leading to disability, and impairing quality of life. Views on hypertension have also changed significantly. 95% of patients suffering from high blood pressure (BP) are classified as having primary (essential) hypertension and only 5% suffer from secondary (symptomatic) hypertension. A special place in the problem of hypertension should be given to the patients themselves, whose careless attitude towards their health dramatically affects the prevalence of hypertension [10,11].

Arterial hypertension is currently attracting unprecedented attention not only from doctors but also from the entire global population.

Characteristics of arterial hypertension severity:

- Optimal blood pressure: less than 120 and 80 mmHg
- Normal blood pressure: less than 130 and 85 mmHg
- High normal blood pressure: less than 139 and 89 mmHg

• Stage I hypertension: SBP 140-159 and/or DBP 90-99 mmHg

• Stage II arterial hypertension: SBP 160-179 and/or DBP 100-109 mmHg.

• Stage III arterial hypertension: SBP over 180 mmHg and/or DBP over 110 mmHg.

It has been proposed to also define systolic arterial hypertension as SBP greater than 140 mmHg and/or DBP less than 90 mmHg [12,13,14]. The pathogenesis of hypertension is based on an increase in cardiac output and peripheral vascular resistance [15].

Objective: The aim of the study was to identify the main risk factors influencing the development of hypertension and to develop evidence-based preventive measures taking into account the prevalence of this disease to determine early diagnosis and prevention at the primary health care level and to study the incidence of hypertension.

To achieve this goal, the following objectives were set:

• study of materials on hypertension in young people, methods of its early detection and primary prevention;

• assess awareness of hypertension and the presence of risk factors;

• health characteristics based on the results of screening diagnostics and self-monitoring;

• development of recommendations for the primary prevention of hypertension.

Materials and methods of the research: the following were used in the research: informational and bibliographical survey, sociological survey and observations. Initially, the awareness of young people regarding hypertension and the presence of risk factors were assessed. A survey was conducted among 118 respondents, of whom 6% were aged 20–24 years, 24% were aged 25–29 years, 9% were aged 30–34 years, and 43% were aged 35–40 years. Regardless of blood pressure control, a lifestyle survey was conducted at a high level.

Results: The survey showed that only 31 (24.8%) respondents have sufficient knowledge to take care of their health; 85 (68.0%) need to gain knowledge on hypertension prevention and 107 (85.6%) have risk factors. To more accurately assess the level of health and identify risk factors for the development of hypertension, a physical examination was conducted. The study included an assessment of anthropometric data, physical development, an assessment of the state of the cardiovascular system (blood pressure - BP, pulse oximetry, express assessment of the state of the heart with the registration of a health passport. During the examination and processing of health passports of 118 respondents, it was found that 13.2% of people had blood pressure ≥140/90 mm Hg; 56.4% have risk factors for the development of hypertension, of which 31.4% had 2 or more risk factors. 12.2% of respondents were found to be overweight and 4% were found to be obese. The obtained information made it possible to determine the need of young people for the correction of risk factors, to

identify groups taking into account individual risk factors and to develop prevention programs for them, to distribute them among health schools and to test healthy lifestyle programs, stress prevention, balanced nutrition, prevention of physical inactivity and hypertension.

Conclusions: Thus, primary prevention activities developed for the functioning of health schools as a form of group, person-centered counseling can become part of an integrated approach to the strategy for the prevention and control of non-communicable diseases, including hypertension. The Hypertension Optimal Treatment (HOT) study showed that lowering blood pressure to normal levels significantly reduces mortality and the incidence of cardiovascular complications, which is also true for individuals with mild to moderate hypertension. Recommendations for target blood pressure levels have changed several times over the past few years. In the lead-up to the 2018 Guidelines, one of the most intriguing questions was whether European experts would support the position of American societies on lowering target BP levels [3,17]. Modern concepts of arterial hypertension, formed on the basis of epidemiological studies, include such concepts as target blood pressure, which is the same for patients of all ages - less than 140 and 90 mm Hg, and for patients with diabetes - less than 140 and 85 mm Hg, risk reduction, and assessment of the risk of developing cardiovascular diseases and their complications [2,8]. Hypertension is not only one of the most common diseases, but also one of the least diagnosed. A characteristic that complicates the early diagnosis of hypertension in young people is the transient nature of the increase in blood pressure. A practicing physician may not always be able to record blood pressure during periods of elevated blood pressure in young people with transient and short-term increases. However, it is known that rare episodes of elevated blood pressure can lead to sudden cardiovascular complications. Another important feature of the initial stages of hypertension is a long asymptomatic period, due to which young people do not know about the disease for a long time, rarely consult a doctor and are not inclined to independently control blood pressure, even during periods of poor health. [16,17,18].

About half of the cases of early development of hypertension can be prevented by preventive measures against risk factors [4]. In this regard, priority is given not only to the development of preventive programs and the search for the most adequate ways in the primary level of providing medical care and methods of protecting the health of young people, but also the formation of health monitoring, its information support, as well as criteria for the effectiveness of programs aimed at developing self-protective behavior among young people, as the basis for a global preventive space (5,10,11). Active and widespread implementation of prevention reduces the risk of recurrent cardiovascular complications [17,18]. Based on the examination data, it can be concluded that an increase in maximum blood pressure readings indicates

manifestations of pre-hypertension or hypertension. Considering the patients' less critical blood pressure levels, their age, and the absence of target organ damage, doctors did not prescribe drug therapy to any of the patients, limiting themselves to recommendations for non-drug therapy and preventive measures. The results of the survey and screening diagnostics allowed us to take a new look at the problem of preventing the development of arterial hypertension. It is obvious that high blood pressure in young people should be reduced, starting from adolescence (under medical supervision), to optimal levels not only to improve quality of life, but also to prevent cardiovascular disease. The most promising approach to primary prevention of hypertension and its complications is the development of a health education system in schools. Developed prevention programs and the "Arterial Hypertension: A Controllable Disease" recommendations can be used to plan appropriate interventions. The effective operation of health schools depends equally on the effective organization of the school itself and on effective external management – on the organization of the selection and referral to schools in need of such intervention. Thus, summing up the above, we can conclude that the problem of hypertension is very acute throughout the world, as it is the leading cause of death. Only a complete examination of outwardly asymptomatic patients and timely prevention of complications will keep the nation healthy and significantly reduce the incidence and mortality rates. During timely medical examinations of the population, the general condition of the body is assessed, and recommendations are given on maintaining a healthy lifestyle, following a diet, and prescribing medications to prevent the development of complications of existing diseases.

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