
The Importance of Risk Factors in the Etiology of Arterial Hypertension

Narzulaeva Umida Rakhmatulloevna

*PhD of the Department of Pathological Physiology Samarkand State Medical University Samarkand,
Uzbekistan*

Pardaeva Zilola Suvankulovna

*Assistant of the Department of Pathological Physiology Samarkand State Medical University
Samarkand, Uzbekistan*

Abstract: No matter how advanced medicine and pharmaceuticals are in the modern world, the risk factors for hypertension are also increasing due to civilization, environmental pollution and global climate change. Although genetic predisposition is of great importance in the development of hypertension, risk factors play a major role in the development of the disease.

Keywords: arterial hypertension, excess weight, sodium content, meteorological factors, arterial blood pressure, microcirculation.

Although the etiology of hypertension remains unknown to this day, several risk factors predisposing to the development of the disease have been studied. Major risk factors for patients with hypertension include: systolic arterial pressure and diastolic levels (arterial hypertension levels I–III); age (men above 55, women over 65); tobacco smoking; dyslipidemia: total cholesterol levels > 6.5 mmol/l (250 mg/dl) or low density lipoprotein > 4.0 mmol/l (155 mg/dl); high density lipoproteins < 1.0 (for men) < 1.2 (for women) mmol/l; in family Anamnesis diseases of the cardiovascular system, which can be observed at an early age (age from 55 years for men and younger than 65 years for women); abdominal obesity (abdominal circumference > 102 cm in men and > 88 cm in women); C-reactive protein > 1 mg/dl .

Additional risk factors include impaired tolerance to glucose, low physical activity, high fibrinogen levels. Niiranen TC, Hanninen MR, Jahanssan J, et al. in his studies conducted, he found Head Risk Factors for cardiovascular disease, office blood pressure (systolic / diastolic risk [HR] of 10 / 5 mm. Hg 1,22 / 1,05–1,22) taking into account, in the models of the proportionality risk of Coke) and in the measurement of arterial blood pressure at home (HR, 1.23 / 1.18; 95% reliability index, 1,13–1,34 / 1,10–1,27) were prognostic factors of cardiovascular events. However, if both arterial blood pressure are included in the models at the same time, only the measurement of arterial blood pressure in home conditions (HR, 1.22 / 1.15; 95% reliability index, 1,09–1,37/ 1,05–1,26), but not in the office measurement of arterial blood pressure (HR, 1,01 / 1,06; 95% reliability index, 0,92). From 1.12 / 0.97 to 1.16) was a prognostic factor for cardiovascular diseases. (total mortality 1.11; 95% reliability index 1.01 / 1.23). The result of the studies carried out shows that arterial blood pressure measured at home, measured in office conditions in the clinic, was found to be prognostically higher than arterial blood pressure .

According to WHO, to date, 30% of the entire world population has the problem of excess weight. The number of people suffering from obesity increases by 10% every 10 years. And the likelihood of developing hypertension is 50% higher in obese people with excess body weight than in people with normal body weight. According to the results of Framingham studies, every 4.5 kg of excess weight systolic arterial pressure of 4.4 mm in men.s.she to 4.2 mm in women.s.it leads to an increase in ga .

In hypertension, damage to the target organs (heart, blood vessels, eye retina blood vessels, kidneys, brain) occurs as follows: left ventricular myocardial hypertrophy based on ECG, and in echocardiography, the index of the mass of the left ventricular myocardial for men ≥ 125 g/m² for women ≥ 110 g/m² ; an ultrasound sign of thickening of the artery wall (intima-media complex focal narrowing; slight increase in blood creatinine levels: 115-133 μ mol/l (1.3–1.5 mg/dl) for men, 107-124 μ mol/L (1.2–1.4 mg/dl) for women; microalbuminuria 30-300 mg/milk; albumin/creatinine ratio in urine ≥ 22 mg/g (2.5 mg/mmol) for men, ≥ 31 mg/g (3.5 mg/mmol) for women; hypertonic encephalopathy .

For the prevention and control of hypertension, the need for political desire of the government and political representatives is considered essential. In this regard, there is a special specific role of medical workers, scientific research associations, public communities, private sectors, the family and each individual. Only these mentioned forces allow to find a comprehensive solution to the problems of treatment methods and control technologies that provide prevention and control of hypertension under Combined conditions, as well as delay or prevent the arrival of complications that endanger the lives of patients with facial arterial hypertension (ESC/ESH 2013) .

In the focus of today, the problem in the main focus of the International Medical Association is the global temperature rise. The European recommendation for the diagnosis and treatment of hypertension States for the first time that seasonal changes in arterial blood pressure are important, noting that this condition is often associated with climate change . According to the Intergovernmental expert group (Intergovernmental Panel on Climate Change-IPCC)on climate change in the 11th anniversary (1995-2006), the recording of air temperature has been observed for the 12 hottest summers since it began in 1850. IPCC's 2007 report states that climate change has increased morbidity and mortality rates caused by extreme weather conditions, and an increase in the frequency of occurrence of diseases of the cardiovascular system, including hypertension .

Regarding the influence of meteorological factors on hypertension, it should be noted that in the direction of Natural Sciences (Meteorology, heliogeophysical, biophysical, Medical) there are different views on the influence of solar activity and meteorological factors on diseases of the cardiovascular system of the heart, which in any case indicates the complexity of assessing the influence of Meteo and heliophysical factors on The same systolic arterial pressure, which is also the sum of the effect of a number of factors, predominates in a concrete climate . A certain combination of meteorological and geogeliophysical factors can cause a meteo-tropic reaction in patients with hypertension, which reduces the effectiveness of antihypertensive therapy, which negatively affects the general course and outcome of arterial hypertension and diseases of the cardiovascular system. These problems are common everywhere in the world .

Meteorological factors affect the mortality rate from complications of arterial hypertension and cardiovascular diseases: the presence of a strong direct connection with atmospheric pressure, wind speed, precipitation level, the relationship of average strength with air humidity and a strong inverse relationship with air temperature is determined. Studies by Finnish scientists show that staying in a 75 C sauna for 5 minutes has been shown to reduce na excretion by 54% through urine. In Parallel, an increase in the amount of catecholamines in the blood and an increase in the activity of renin and angiotensin II were observed. It was

found that the hot summer temperature led to a deterioration in the condition in 46.3% of patients with diseases of the cardiovascular system .

The territorial location of our republic, the intensity of solar radiation, the specificity of atmospheric circulation and the relief of the location affect its climate. And the remote location of the territory of Uzbekistan from the seas and oceans ensures a dry and sharply continental climate. Due to the large number of sunny days, the daily and annual temperature shifts differ sharply, and precipitation is also less. In summer it is observed that the sun is much higher than the horizon, and on June 22 it is observed that in the north of the Republic the sun rises above the horizon to 68 degrees of arterial hypertension, in the south to 76 degrees of arterial hypertension. In summer, in Kyzylkum and other desert areas, sunny days are 4,460 hours throughout the year, due to the increase in the duration of the day to 15 hours. During the year, 137-160 kcal of radiation per centimeter of Square area comes. In the steppes, the weather is hot and dry in the summer season. All this is characteristic of the climatic area, which is followed by the name of the arid zone. The Arid zone, in turn, is divided into 3 parts, (according to the climate classification according to Kyoppen) they consist of subtropical hypertensives: hot deserts (BWh), cold deserts (BWk), mild climates (BWh/BWn). The studies we have conducted refer to the mild arid zonal arterial hypertension zone.

Numerous observations show that several diseases in particular hypertension disease of meteorological in Cardiological and neurological manifestations: a shift in air humidity by 30-60%, inevitable fluctuations in atmospheric pressure lead to a further aggravation of the course of the disease and a decrease in the body's flexibility reserves .

The appearance of meteoropathic reactions in patients with hypertension leads to the development of systemic disorders in hemodynamics and microcirculation against the background of changes in a number of climatic factors.

Conclusions. In conclusion, it can be said that in the development of not only hypertension, but also all cardiovascular diseases, not only hypodynamia, excess weight, excessive consumption of table salt, but also meteorological factors are of great importance. Elimination of risk factors such as correctable hypodynamia, overweight, hypercholesterolemia allows to reduce meteorosensitivity.

REFERENCES

1. Bohm M, Schumacher H, Teo KK, et al. Achieved blood pressure and cardiovascular outcomes in high-risk patients: results from ONTARGET and TRANSCEND trials. *Lancet*. 2017; 389:22 26-37.
2. Umida Rakhmatulloeva Narzulaeva, Gulnoza Utkurovna Samieva, Zilola Suvankulovna Pardaeva Pathogenetic Aspects of Verified Risk Factors Such as Arterial Hypertension and Dyslipidemia in the Development of Chronic Heart Failure *American Journal of Medicine and Medical Sciences*, 2020 10(10), pp. 776-779
3. Ярмухамедова С. Х., Бекмурадова М. С. Особенности диастолической дисфункции правого желудочка у больных артериальной гипертензией на фоне сердечной недостаточности //Национальная ассоциация ученых. – 2016. – №. 1 (17). – С. 18-18.
4. Ehret GB, Caulfield MJ. Genes for blood pressure: an opportunity to understand hypertension. //*Eur Heart J* 2013; 34:951–961.
5. U.R. Narzullaeva, G.U. Samieva, U.B. Samiev, The importance of a healthy lifestyle in eliminating risk factors in the early stages of hypertension, *Journal Of Biomedicine And Practice* 2020, Special Issue, pp. 729-733
6. Fight against arterial hypertension. // Report of the WHO Expert Committee, M.2007. -20

7. Narzulaeva, U. R., Samieva, G. U., & Hasanov, F. R. THE IMPORTANCE OF A HEALTHY LIFESTYLE IN ELIMINATING RISK FACTORS IN THE EARLY STAGES OF HYPERTENSION. Assessment of neonatal platelet adhesion, activation, and aggregation / SM BakerGroberg, S. Lattimore, M. Recht, OJ McCarty, et al. // J Thromb Haemost. - 2016. - Vol. 14, № 4. - p. 815-827
8. Climate change and communicable diseases in the EU Member States. Handbook for national vulnerability, impact and adaptation assessments. Eur Centre Dis Prevent Cont 2010; 42 p.
9. Narzulaeva Umida Rakhmatulloevna, Samieva Gulnoza Utkurovna, & Ismatova Marguba Shaukatovna (2020). SPECIFICITY OF THE CLINICAL COURSE OF THE INITIAL STAGES OF HYPERTENSION IN ARID ZONES OF UZBEKISTAN AND NON-DRUG APPROACHES TO TREATMENT. Кронос, (4 (43)), 15-17.
10. Bavishi C, Goel S, Messerli FH. Isolated Systolic Hypertension: An Update After SPRINT. Am J Med. 2016; 129(12):1251-8.
11. Aburto NJ, Ziolkovska A, Hooper L, et al. Effect of lower sodium intake on health: systematic review and meta-analyses. BMJ. 2013; 346:f1326.
12. Чазова И.Е., Жернакова Ю.В. Клинические рекомендации. Диагностика и лечение артериальной гипертензии. // Системные гипертензии. – 2019. - № 16 (1). – С. 6–31
13. Салимов, О. Р. (2017). Комплексная реабилитация пациентов с частичным отсутствием зубов, направленная на профилактику прогрессирующей атрофии тканей протезного ложа. *Medicus*, 14(2), 62-64.
14. Сафаров, М., Салимов, О., Хужаева, Ш., Ирсалиева, Ф., & Зокирхужаев, К. (2016). Микробиологические показатели у больных со средними дефектами зубных рядов после несъемного протезирования. *Stomatologiya*, 1(1 (62)), 31-35.
15. Habilov, N. L., Akbarov, A. N., & Salimov, O. R. (2016). Influence of removable laminar prostheses on the oral microbiocenosis. *Medicus*, 6(12), 82-5.