

## NURSES' ROLE IN CARRYING OUT REHABILITATION ACTIVITIES IN HYPERTENSIVE PATIENTS

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### ABSTRACT

The medical field is developing rapidly. In the latter years, we can observe that the disease of hypertension has been occurring more not depending on age and sex. Among the population, the incidence of stroke diseases is in previous places, the cause of which is mainly smoking and alcohol consumption. Scientists thought much more about hypertension and its consequences. We can see that for such patients need to organize rehabilitation. According to research, it leads to a change in the quality of life. It is possible to restore damaged functions, with rehabilitation measures it is carried out. Timely rehabilitation can be achieved so that the disease does not escalate and the complications are reduced, and after the treatment, most patients are able to conduct their own work activities.

**Key words:** hypertension, blood pressure, alcohol, rehabilitation.

### INTRODUCTION

Hypertension is a very common disease among diseases of the cardiovascular system, accounting for 80-85% of all arterial hypertension, symptomatic (secondary) hypertension is 15-20%. Women and men suffer from this disease equally. The list of terms used abroad has been adopted the term "arterial hypertension" in coexistence with the symptoms of diagnosis of syndromes and verification; it reflects the high degree of arterial pressure and evidence in itself. Therefore, it differs from primary (essential) and (symptomatic) arterial hypertension.

Hypertensive disease (HD) is a chronic pathological condition of the body, has a genetic origin, is important in the development of long-term systolic hypertension, is a disease that leads to dysfunction of the central nervous neuroendocrine system and membrane receptor pathology, disorders of the structure of vessels, heart, liver. The degree of consequences of HD is high, and it is dangerous with stroke, infarct, heart failure, chronic renal failure, as well as with a lethal outcome. In addition, increased blood pressure is associated with the development of atherosclerosis, ischemic heart diseases. The increased risk of disease progression is higher in men than in women, taking into account the presence of harmful habits, various stresses, the transition from generation to generation, and in women-more menopause. Another factor to increase the risk of cholesterol, the suppression of the effects of insulin to glucose in diabetes mikroalbuminuriya, obesity, little mobility, an increase in the level of fibrinogen, tissue activators declining, plazminogen the exogenous 1-type inhibitors increased aminoprotein concentration, the high cost of coagulation factor, gomosistein, 01-dimer C-reactive protein, focusing esterogen failure, cardiovascular failure, chronic immune system in the presence of the process, its clear stirring in the presence of software for technical, socio-economic status of low profile, ethnic layer, living in the endemic geographic region, the specific features of the disease (latent aggressiveness, airy "A-appearance behavior") cause an increase in blood pressure, mainly a violation of the blood circulation balance and an increase in peripheral resistance of the vessels. The minute volume increase in blood circulation also affects the heart. It, in turn, leads to a decrease in the myocardium and an increase in blood circulation. Peripheral resistance of the vessels depends on the degree of resistance of the arterial tone and the degree of vascular remodeling (narrowing of the vessels as a result of mediointimal complex hypertrophy and an increase in the rigidity of the vascular wall). Violations of hemodynamics in HD are due to changes in the cardiovascular system and kidneys, as well as a violation of the physiology of the pressur and depressur mexanizms rhythm. The increase in arterial pressure in HD leads to changes in the blood circulation of the Central and sympathetic nervous system, which is closely related to endocrine hardware activity, kidney function and microcirculation. At present, the structure of the initial factors of arterial hypertension is the detection of predisposition to genetic diseases, it appears in the violation of the spread of the ion transport system. The result of this is a decrease in the level of silcysi exchange, hormonal cellular connection, the appearance of hypothalamic-pituitary renal activity, renin-angiotensin-aldosterone, insular system, etc. Saturation of cells to calcium increases strengths the contraction of smooth muscle vessels increases the

peripheral resistance of functional components. The resulting myocardial hypertrophy and high contraction, the rupture of the wall and narrowing of the vessels determine the high level of arterial pressure. As a result, arterial hypertension is the result of a violation of baroreceptor communication with the center of the brain, sympathetic nerves, resistive and capacitive vessels, renin-angiotensin activity of the heart muscle, increased aldosterone secretion and, ultimately, increased consumption (termination) of depressor mechanism, (prostaglandin F<sub>2</sub>, kallikrin, bradykinin), vessels 12 prostaglandin or prostacyclin, calcitonin and the dopaminergic system is considered to be the relaxation factor of the tension of the endothelial muscles) and the heart (the front of the ventricles factor). Pathogenetics of Arterial hypertension is that insulin resistance in tissues (due to sodium reabsorption, increased activity of the sympathetic nervous system, protooncogene expression and relaxation of vasodilating stimuli), increased thickness of the vascular pathway receptor and myocardium, its adrenergic cortisone secretion, increased sensitivity to adrenergic effects and thyroid hormones, changes in the main biological rhythm of the nervous system and, at the same time, the rhythm of the vascular system is a regularity. Endothelial dysfunction in the pathogenesis of hypertensive diseases is associated with an increase in the synthesis of endothelin, and the decrease in the synthesis of nitric oxide is the main role. Reconstruction of the heart and vessels, a prolonged course of hypertension, a violation of blood circulation as a result of work in severe conditions, leads to a violation of relaxation, and myocardial contraction, cerebral, coronary, complication peripheral hemodynamics lead to stroke, infarction, heart and kidney failure.

The main syndrome of HD is cardialgia, cephalgia, arterial hypertension. Neurohumoral is dysregulation, membrane receptor pathology, kidney dysfunction. The main goal in the treatment of HD is to restore the uniformity or norm between the regurgitation of the pressor and depressor mechanisms of the ABP. The main drugs in the treatment of Arterial hypertension are neurotopoeuvres. These means include the antagonist renin-angiotensin system of smooth muscle elements of the vessels, diuretic agents. Physiotherapeutic treatment of HD is aimed at strengthening MAT (sedative method) braking process, correction of arterial hypertension (hypotensive method), reduction of sympathoadrenal system activity, vegetocorrection method, reduction of activity of renin-angiotensin-aldosterone (RAAS), and the mechanism of ABP regulation is directed to renal volume correction.

**Objective:** Coverage, study and improvement of the activity of rehabilitation programs of physical exercises in the rehabilitation of patients with hypertension.

**Research materials:** For the study and analysis of the theoretical material on the topic of the study 58 patients from cardiorehabilitation Department of 1st Clinic of the Tashkent Medical Academy and 58 patients from cardiology department were involved in the survey.

**Research methods:** The following research methods were used to obtain the results: theoretical and statistical, questionnaire survey.

**Obtained results:** The study shows that in order to improve the rehabilitation work of the Department of the Tashkent Medical Academy, rehabilitation programs were presented for patients undergoing treatment, and the patient's condition was regularly monitored, a survey was conducted by patients before discharge, analyzed, as a result, it was noted that the condition of patients participating in the program improved. The main tasks of rehabilitation in Arterial hypertension are: normalization of arterial blood pressure, reduction of body weight, refusal of harmful habits (tobacco smoking and alcohol), improvement of lipid profile, regulation of physical exertion, improvement of the psycho-emotional state, Prevention of lesions and clinical signs of target organs, maintenance of patient social status in the family and society, restoration of the ability to work

The modern approach of patient rehabilitation includes, on average, the 3-5-week hospital phase of restorative treatment.

In this program, patients are prescribed treatment gymnastics as a physical exercise. The main goal of therapeutic physical education at the stationary stage is the activation of the extracardial factor of blood circulation, the elimination of hypodynamia, the preparation of patients for household physical exertion.

The entire hospital stage is conditionally divided into 4 activity steps. Bunda is assigned to each patient an individual step and gradually increased.

**In the 1-activity step,** the patient is prescribed a bed regimen. Exercises are performed in a lying position in bed. Between exercises, breathing exercises are performed. The duration of the training is 10-12 minutes. During the training period and in the first three minutes after completion puls 20 beats, number of breaths 6-9 times, SABP 20-40  $\mu\text{g/L}$ , DABP 10-12  $\mu\text{g/L}$  the increase is an indication that the stresses are being carried out correctly. When the organism reacts adequately to complex therapeutic gymnastics, it goes to step 2, when angina pectoris attacks disappear, when there is a negative dynamics on the ECG.

**In the 2-activity step,** the patient is allowed to sit at the table, eat at the table, walk around the bed and in the ward. Complex's main tasks: to engage the cardiorespirator system, prepare the patient for a walk in the corridor and for a free fall on the stairs. Treatment № 2 Gymnastics complex is performed in lying - sitting - lying cases. Gradually, the number of exercises to sit down and perform is

increased. Treatment №2 performing gymnastics complex is recommended to patients in the form of morning hygienic gymnastics. The duration of the training is 10-15 minutes. Exercise complex, which calls for ST - segment depression, disrupts the rhythm or causes the development of tachycardia more than 100 times a minute, is excluded from the program, or more gentle exercises are added. Indications for the transfer of the patient to the 3-activity Step are adequate reaction of the pulse and ABP, orthostatic test, the formation of a T-coronary tooth.

**In the 3-activity step** frequent violations of the paroxysmal rhythm with repeated angina attacks, symptoms of a lack of blood circulation and severe hemodynamic changes, as contraindications of the patient. The 3-step of activity begins when the patient leaves the corridor and continues until he leaves for the street.

The patient is allowed to walk in small steps in the corridor from 50 to 200 meters (up to 70 steps per minute). The main tasks of treatment gymnastics in Step 3-activity: preparation of the patient for full self-service, free walking on the street, dosed walking. Treatment gymnastics is performed in the sitting and standing position. Gradually №3 treatment is carried out increasing the size of the strain on the border of gymnastics. The pace of the exercise is accelerated by a slow start, the total duration of the exercise is 20 minutes. Patients are recommended to perform treatment №1 gymnastics in the form of morning hygienic gymnastics or in the second half of the day. The first exit to the corridor and the first exit to the stairs are recommended to be conducted under the supervision of a telemonitor. In adequate reactions to the strain, it is allowed to travel in the corridor without time and distance restrictions. By this time, patients begin to completely self-disorders, they are allowed to take a shower.

**4-Activity step** (the last step of the hospital stage) involves increasing physical activity at the border of the free regime in patients. The patient is allowed to go outside and take 500-900 steps at a distance of 70-80 m. In Step 4, patients are prescribed treatment № 4 gymnastics. The task of treatment gymnastics in Step 4 is to prepare the patient for the transition to the 2-stage of rehabilitation or to respond to home under the supervision of a local therapist. In the process of performing exercises, it is considered normal that the number of heartbeats increases by an average of 110 times for 3-6 minutes. The pace of walking can range from 70-80 steps per minute to 80-100 steps, and the distance can range from 500-600 meters to 2-3 km. It is allowed to take a walk 2 times a day. Therapeutic nutrition in hypertensive disease is formed on the basis of the main pathogenetics mechanisms in the development of the disease, depending on the severity of complications. Calories of the diet should correspond to the energy expenditure of the body, calories of the diet

should be low when atherosclerosis develops and especially when the concomitant disease is obesity. In ration, the amount of precipitation, mainly saturated fats and animal fats, should be reduced. They are partially replaced by vegetable oils (corn, sunflower, soybean, olive, etc.), because they are rich in high unsaturated fatty acids (linoleic, linolenic, arachidonic acids) and lecithin. Restriction of fat will depend not only on the presence of concomitant atherosclerosis in the diet, but also on the purpose of stopping the excitation processes in the cerebral cortex again. Because I.P. In experimental observations of I.P. Razenkov has proved that fatty nutrition leads to an increase in the processes of reflection in the cortex of the Cerebral Hemispheres. The amount of protein in the ration should correspond to the norms of healthy exteriors (that is, 1kg per 1.2-1.5 g of body weight per day); of course in the ration there should be a sufficient amount of full-fledged proteins. The lack of protein in food leads to a slowing of reflexive processes. When the disease is complicated by nephroangiosclerosis, the amount of protein in the diet should be limited. The amount of carbohydrates is not limited in ration, carbohydrate nutrition, according to experimental data, reduces the excitation processes in the cerebral cortex. Especially rapidly reducing the consumption of digestible carbohydrates (sugar, honey, jam, porridge and rice dishes, confectionary products, etc.) should consume a lot of products rich in vegetable dietary fiber (sour fruits, vegetables, peanuts). It is necessary to limit the intake of light digestible carbohydrates in the development of hidden functional insufficiency of the insular apparatus, hypercholesterinemia and atherosclerosis, vegetable dietary fiber allows to reduce the calorie content of food for a while, without damaging the saturation index, without changing the volume of ration in combination with the outflow of cholesterol (in the case of coprosterin). The richness of fruits, vegetables and ground fruits with potassium, magnesium and vitamins corresponds to the general direction of therapeutic nutrition in hypertension. Restriction of salt in the ration is associated with an increase in the mineralocorticoid function of the adrenal gland (excessive production of aldosterone), since this condition leads to the retention of sodium and fluid in the body. Restriction of salt in the diet contributes to a decrease in the opacity of the central nervous system. Salt is 4-6 gr per day. Salt-free diet when hypertension is complicated by severe and prolonged circulatory insufficiency leads to an increase in diuresis, a decrease in the volume of blood plasma. In addition, salt restriction helps to increase the activity of lipoprotein lipase and reduce cholesterol in the blood, prevent the development of atherosclerosis. Therefore, a lot of salt preservatives can not be salted, marinated products and clupea. It is not recommended to consume salt for a long time, since hypochloremia leads to the accumulation of nitrogen residues in the blood. When the disease is complicated by nephroangiosclerosis, nitrogen residues can be caught in the

body and become a compensatory polyuria, salt can not be very limited in the diet when there is an excessive loss of sodium in the body. Its amount depends on the Daily excretion of sodium with urine (up to 8-12 g per day). It is impossible to limit the liquid when there is no lack of blood circulation, because against the background of nephroangiosclerosis, nitrogen residues accumulated in compensatory ravishdaorganism in polyuria are excreted. The diet should be enriched with vitamins (vitamin R, nicotinic acid, ascorbic acid, riboflavin, pyridoxine), because they support the vital functions of the body for life. Ascorbic acid has a positive effect on oxidation – recovery processes. Reduces the amount of cholesterol in the blood and inhibits the lipid infiltration of blood vessels. Nicotinic acid blood vessels. Depressor effect, improves blood circulation in the brain, heart and kidneys of the head. Riboflavin and nicotinic acid needed for tissue respiration and synthesis of ATP. Riboflavin is necessary to reduce the activity of catecholamines and to exert a pressure effect. Pyridoxine needed to convert linolenic acid into arachidonic acid, thereby providing the lipotropic effect of choline increased and cholesterol discharge from the body. Vitamin R also reduces vascular permeability in part to cholesterol and improves hemodynamics in the capillaries. It is necessary to introduce a sufficient amount of cyanocobalamin into the body. It improves the indicator of lecithin-cholesterin and helps to save choline. At the same time, limiting the intake of Vitamin D prevents the development of atherosclerosis. The diet should be enriched with potassium, magnesium and iodine. Potassium is a physiologic antagonist of and has a direct depressive effect sodium strengthens on the blood vessel wall. It is recommended in case of a lack of blood circulation, since it contributes to the contraction function of the myocardium. Ration should be enriched with potassium salts, because in a hyponatric diet it quickly leaves the body. Magnesium strengthens the braking processes in the cerebral cortex reduces spasm of smooth muscles of the vessels thanks to this lowers arterial pressure through. Magnesium ions have a hypocholesterinemic effect, preventing the development of atherosclerosis. Beans, soybeans, green peas, raisins, figs, lentils, corn, prunes are rich in magnesium. A special" magnesium " diet has been developed and is now used.

### **CONCLUSION**

In the early detection of the disease, the implementation of a wide range of preventive medical examinations, the more Organization of the activities of rehabilitation centers, at the same time, the further strengthening of the promotion of understanding among the population. Within the framework of a multi-faceted approach to the implementation of therapeutic and rehabilitation measures, the importance of nursing care is emphasized in the works of many authors, both local and foreign. In this regard, studies aimed at improving the methods of nursing care, rehabilitation therapy and blood circulation profilactics in the head brain, using

modern printing techniques and evidence-based nursing practice of quality management of medical services, are now gaining scientific and practical significance.

## REFERENCES

1. Laws of the Republic of Uzbekistan, decrees and decisions of the president of the Republic of Uzbekistan, decisions of the Cabinet of Ministers.
2. Tolipova J.O. Innovative technologies in teaching biology. Methodical manual. - T.: «Teacher», 2013. S-34-58
3. Arzikulov R.U. Fundamentals of a healthy lifestyle. - Tashkent I-part. 2005. - 256, 245-p.
4. Muminov H. A healthy lifestyle is the science and practice of Health. - What? Republican Institute of Health and medical statistics, 2006. 40
5. Abdullaev I.K. Lifestyle and human health. - T.: 2006
6. Abidov A.O., Novikov Yu.V. Health is in our own hands. - T.: "Medicine", 1998.
7. Life book: An Encyclopedic Guide to young families. - T.: "East", 2011.
8. European Status Report on Alcohol and Health 2010 / World Health Organization 2010. - P. 25-36, 290-295.
10. Holder H. International guide for monitoring alcohol consumption and related harm. WHO/MSD/MSB/OO.4. / H. Holder // World Health Organization, 2000. - P. 3-15.
11. Hegde S. Influence of physical activity on hypertension and cardiac structure and function / S. Hegde, S. Solomon // Current Hypertension Reports. – 2015. – №17 (10). – P.77.
12. Tikhonova N. Arterial hypertension as factor in the choice of conflict resolution strategies by the older persons / N. Tikhonova, N. Demina, L. Klimatchkaia, et al. // Family Medicine & Primary Care Review. – 2018. – №20 (4). – P.368-372. DOI:10.5114/fmpcr.2018.79349
13. Artemieva, T. System of Amosov / T. Artemieva // Be healthy. - 2011. - No. 1. - S. 32-39.
14. Velensky M.Ya. Physical culture and healthy lifestyle of a student / M.Ya. Vilensky, A.G. Gorshkov. - M.: Knorus, 2013. - 68 p.
15. Nazarova, E.N. Fundamentals of a healthy lifestyle / E.N. Nazarova, Yu.D. Zhilov. - M.: Academy, 2013. - 45 p.