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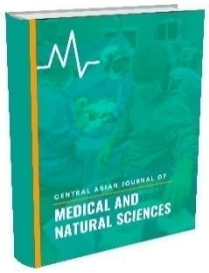

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Literary Review of the Treatment of Arterial Hypertension by Traditional Medicine

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Abstract: Hypertension is one of the most urgent problems of modern medicine today. Supporters of folk or any other ways of treating hypertension, of course, have every right to be enthusiasts of their methods, especially if they are based on the harmony of the regime of work and rest, diet, rational nutrition, adequate physical activity. To date, not only modern methods of diagnosis and treatment are being developed, but also their combined use with traditional medicine.

Key words: arterial hypertension, traditional medicine, private magneto therapy, general magneto therapy, magnetic circulation.

Introduction. Arterial hypertension (AH) throughout the world, including in Uzbekistan, has acquired the character of an epidemic []. When determining the tactics of treating hypertension, international and national recommendations focus exclusively on drug therapy [2,3,4]. In them, non-drug methods of treatment are identified with a decrease in body weight of patients, restriction of salt intake, physical training, elimination of bad habits and correction of psycho-emotional stress [3,4]. Today, such a formulation of the question cannot be considered correct due to the emergence of highly effective methods of physiotherapy and the deepening of knowledge about the mechanism of their action. Numerous studies performed in the last decade suggest that the addition of standard antihypertensive drug therapy with modern individually selected pathogenetically substantiated natural and preformed therapeutic physical factors is expedient and makes it possible to successfully address the issues of treatment and prevention of hypertension [5]. In recent years, there has been an increased interest in general magnetic therapy, which today dominates the structure of physical methods for the treatment of hypertension [5,6]. A special place in the magnetotherapy of hypertension is occupied by equipment that allows for a general effect on the human body.

Main part Unlike local magnetotherapy , which has become widespread, general magnetotherapy allows solving some special therapeutic problems [6]. Firstly, a small amount of absorbed energy under the action of a low-intensity magnetic field requires an increase in the volume of tissues interacting with a physical factor, which explains the desire to use methods of general exposure. Secondly, in the treatment of many diseases, it is important to influence the entire body, the effect on its reactivity. With local methods of magnetotherapy, the effect is achieved only through reflex mechanisms, which often requires an increase in the intensity of irritation, which is not always

possible. With general magnetotherapy , the necessary therapeutic effect is achieved using small doses of magnetic fields. Thirdly, with general magnetotherapy , the principle of an adequate ratio of the effects of magnetic fields is implemented: with an increase in the intensity of exposure, the likelihood of non-specific (up to stress) effects increases against the background of a specific action. The formation and development of general magnetotherapy are aimed at strengthening and maintaining the specific effect of magnetic fields on the human body [7]. Fourthly, general low-intensity exposure to magnetic fields has a synchronizing effect on the work of many functional systems of the body, through which the formation of effective protective reactions and compensatory-adaptive processes is achieved without high energy costs [7, 8]. The first studies on the effectiveness of general magnetic therapy in AH were carried out 15 years ago [6, 7]. The authors proved that it is advisable to prescribe general magnetic therapy procedures for elderly patients with AH . At the same time, a positive result of treatment is achieved by reducing intravascular microcirculation disorders, peripheral vascular resistance and adrenergic vascular hyperreactivity, and improving the diastolic function of the left ventricle. It was concluded that treatment with general magnetotherapy lasting 12 minutes can be recommended for elderly AH patients with eukinetic and hyperkinetic hemodynamic types, normal and reduced adrenergic vascular reactivity. G.G. Efremushkin et al . [8] and N.V. Duruda [9] developed the optimal parameters of the method of general magnetotherapy using the Magnitor -AMP device in the complex sanatorium treatment of patients with hypertension. In these works, it was proved that the inclusion of general magnetic therapy in the medical complex of patients with hypertension significantly improves the clinical course of the disease, helps to reduce systolic and diastolic blood pressure (BP), has a corrective effect on systemic and cerebral hemodynamics, improves the autonomic regulation of the cardiovascular system and mainly due to the normalization of intravascular blood flow. At the same time, the course use of general magnetic therapy for patients with hypertension is accompanied by a persistent therapeutic effect, a decrease in the dose regimen of antihypertensive drugs. When analyzing the dynamics of lipid metabolism in this category of patients [10], a decrease in the level of cholesterol, low and very low density lipoproteins and an increase in high density lipoproteins were found. The authors showed that in almost half (45%) of cases, there was an improvement in blood circulation in the basin of the carotid and subclavian arteries, a decrease in the increased activity of the sympathetic nervous system was observed with a simultaneous tendency towards an increase in vagotropic influences. Of interest are the studies of T.V. Kulishova et al . [1-4], which proved that the use of general magnetic therapy in the complex treatment of hypertension normalizes blood pressure, has a significant corrective effect on central and cerebral hemodynamics, improves magnetic circulation, normalizes the vegetative status, and reduces the average daily dose of antihypertensive drugs by 2 times. The use of general magnetic therapy in the secondary prevention of hypertension allows the correction of such risk factors as hypercoagulability , hyperlipidemia . General magnetotherapy has a positive effect on the psycho-emotional status of AH patients, having a normalizing effect on the level of reactive anxiety and contributing to the restructuring of personal response. It is concluded that people with stress- induced AH are indicated for the use of general magnetic therapy. The conducted studies have established that the use of general magnetic therapy in the treatment of stress- induced AH "at the workplace" provides a significant improvement in the assessed parameters: blood pressure, psycho-emotional and vegetative status, stress reactivity and quality of life (QoL). T.V. Repkina [5] concluded that the use of OMT in elderly patients with chronic heart failure of I-II functional class improves general well-being, has a hypotensive effect, positively affects hemodynamic parameters, exercise tolerance, and also improves the quality of life of patients and reduces readmission rate. The relationship between the spectral characteristics of the central link of autonomic regulation, parameters of the daily BP profile, magnetic circulation, elastic properties of arterial vessels and vascular remodeling in elderly people with various types of arterial hypertension - isolated systolic and systolic-diastolic AH was studied by O.E. Alypova et al . [6–8]. A comparative evaluation of the antihypertensive efficacy of complex

physiotherapy with the use of "dry" carbonic baths and general low-frequency MT was carried out. The effectiveness of using a combination of general magnetotherapy procedures and "dry" carbonic baths for the correction of identified disorders has been established. Conducting a course of low-frequency pulsed general magnetic therapy in hypertensive patients with initially impaired heart rate variability parameters statistically significantly leads to a pronounced positive effect on autonomic regulation of heart rhythm [9, 10]. IN AND. Shumsky et al . [11] proposed a hardware-software eight-channel complex of constant, variable, pulsed and "running" magnetic fields "KAP-MT/8 Multimag " for the treatment of AH. Increasing the effectiveness of treatment, preventing the progression of the disease, reducing the risk of vascular accidents allowed the authors to recommend this method of physiotherapy in practical healthcare. D.P. Drapova et al . [12] consider that in case of hypertension, it is advisable to use the combined effect of general magnetic therapy and intravenous ozone therapy , which can improve lipid metabolism and restore the impaired parameters of the antioxidant system. Of interest are the studies of N.A. Podgornova [13] and N.A. Podgornova et al . [14], which presents the results of the use of general magnetic therapy in the complex treatment of patients with menopausal syndrome. After the course of treatment, most of them showed a decrease in systolic and diastolic blood pressure. In addition, the analysis of indicators of lipid peroxidation and the antioxidant defense system revealed a trend towards their normalization, which was combined with a positive clinical effect. L.T. Gilmutdinova et al . [4, 6] developed a method for the complex treatment of arterial hypertension with metabolic syndrome, including a two-stage use of general magnetic therapy using the UMTI-3F Kolibri-Expert physiotherapy unit. It has been established that the use of general magnetic therapy improves cerebral blood flow by 12.5%, reduces systolic and diastolic blood pressure by 18.6 and 14.6%, respectively, leads to a decrease in the level of atherogenic blood lipid fractions, and regression of the clinical symptoms of the disease in 86.4 % of patients with improvement of psychophysical parameters. According to the authors, this method of physiotherapy increases the effectiveness of rehabilitation treatment by improving hemodynamics, coronary blood flow, carbohydrate and lipid metabolism. L.P. Mrikh [7] in patients with vascular diseases of the extremities and concomitant hypertension compared the effectiveness of local magnetotherapy from the Gradient apparatus with the results of treatment of general magnetotherapy from the Avrora MK-01 apparatus. It has been proven that a distinctive feature of the general impact of a traveling pulsed magnetic field is a decrease in blood pressure and an improvement in MC. A similar opinion was expressed by E.A. Mikheeva et al . [8], who studied the effectiveness of general magnetic therapy in people with dystrophic diseases of the musculoskeletal system and arterial hypertension. In 72% of patients with hypertension, the authors assessed the effect of general magnetic therapy treatment as good - headaches, cardialgia , feeling of heaviness and noise in the head disappeared and decreased, there was a decrease in blood pressure, heart rate, which made it possible to reduce the daily dose of antihypertensive drugs. E.O. Korovin [49] and S.G. Abramovich et al . [10,11] developed and substantiated complex methods of general magnetotherapy in combination with visual photochromotherapy and local magnetotherapy with a “running” pulsed magnetic field in elderly patients with hypertension in a polyclinic setting. It has been proven that this therapeutic approach helps to reduce adrenergic vascular reactivity, normalize perivascular and intravascular disorders in the final blood flow system. The inclusion of visual photochromotherapy in the treatment complex in addition to general magnetic therapy in elderly patients with AH improves their quality of life due to a positive effect on the dynamics of cephalgic , dyssomnic and asthenic syndromes, eliminates impaired attention, memory and speed of sensorimotor reactions and does not cause tension in the mechanisms of nonspecific adaptation. The inclusion of local magnetotherapy with a "running" pulsed magnetic field into the medical complex has a geroprotective effect, helps to reduce peripheral vascular resistance, increases the degree of nighttime decrease in systolic blood pressure and normalizes the energy supply of the pumping function of the heart. A.Yu. Dolbilkin et al . [52] and S.G. Abramovich et al . [13] presented the results of studying the effect of spa treatment, including balneotherapy with

sodium chloride baths in combination with general and transcranial magnetotherapy , on the state of magnetic circulation in patients with hypertension. Using the method of laser Doppler flowmetry , it was found that the addition of balneotherapy with general magnetic therapy procedures , as well as combined methods of general and transcerebralmagnetic therapy contributes to a more pronounced effect on the morphofunctional state of microvessels in patients with hypertension. It should be noted that such an action occurs due to a favorable restructuring of the mechanisms of regulation of magnetic circulation: the dominant influence of active modulators (endothelial and vasomotor) is formed against the background of a decrease in passive (pulse and respiratory waves).

Conclusions : Thus, general magnetic therapy is an effective method of treating hypertension due to its beneficial effect on the leading links in the pathogenesis of the disease **.** The most likely directions in the implementation of the therapeutic effect of this physical factor are: 1) a positive effect on the psycho-emotional sphere; 2) normalizing effect on the autonomic supply of cardiovascular tone; 3) myotropic vasodilation ; 4) modulating effect on central and peripheral hemodynamics; 5) corrective effect on MC, vascular endothelial dysfunction and adrenergic vascular reactivity; 6) activation of self-regulating non-specific adaptive systems of the body. It seems promising to continue scientific research to develop programs for the pathogenetically substantiated use of OMT in various forms of hypertension, schemes for differentiated prescription of various exposure parameters and dosimetric characteristics of this therapeutic physical factor, as well as to substantiate the possibilities of using OMT in combination with other natural and preformed methods of physiotherapy .

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