

Herbal medicine for ischemic heart and brain disease  
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Phytotherapy of ischemic diseases of heart and brain  
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#### SUMMARY

The results of the high efficiency of phytotherapy in patients with ischemic heart disease and cerebrovascular disease are presented. Against the background of taking infusions of multicomponent, individually selected fees, the number of stenocarditis attacks decreased, and exercise tolerance increased. Herbal medicine completely prevented vascular accidents (heart attacks, strokes), reduced high blood pressure, reactive anxiety, normalized the lipid spectrum, providing a pronounced stress-limiting effect. Blocks of plants and specific species used by the authors are given.

Key words: herbal medicine, medicinal plants, coronary heart disease, cerebrovascular disease.

#### RESUME

Results of the highly efficient phytotherapy of patients with ischemic diseases of heart and brain are presented. Consumption of polycomponent individual herbal compositions reduced number of stenocardia attacks, increased tolerance of physical stress. Phytotherapy prevented vascular failures (infarction, stroke), reduced increased arterial blood pressure, reactive anxiety, normalized lipids, caused expressed stress-limiting action. Compositions and certain herbs used by authors are listed.

Keywords: phytotherapy, remedial plants, ischemic disease of heart, cerebrovascular diseases.

#### INTRODUCTION

The urgency of the problem does not need to be discussed, since it is well known that cardiovascular diseases leading to strokes and heart attacks are the dominant causes of mortality and disability. In this regard, an expanded search for effective methods for preventing vascular catastrophes is necessary.

According to the established medical standard, exclusively drug therapy is carried out for patients with hypertension, atherosclerosis of the arteries of the brain and heart (statins, antiplatelet agents, hypotensive, coronary artery disease, drugs that improve brain perfusion). The possibilities of herbal medicine are essentially ignored.

WHO prescribes the assimilation of methods and arsenal of traditional and traditional medicine as one of the priority directions of the development of medicine in the XXI century. However, in practice, assimilation as such does not occur in our country, despite convincing evidence that traditional medicine has developed effective methods of phytotherapy for cardiological and neurological patients for many centuries, even millennia, as follows from available sources [1, 12, 16, 18, 22, 26, 27, 28, 30, 31, 32]. Moreover, the poor practice of using one plant (hawthorn tincture, extracts of valerian, leuzea, motherwort forte, tanakan - examples are numerous) contradicts the method of using the ribbon of synergists, plant blocks in traditional medicine, which is postulated in the cited sources. It is no coincidence that herbal medicine is the basic discipline of traditional medicine in the countries of East Asia: China, Korea, Japan [12], Tibet [28, 30, 31, 32], Iranian Tajik medicine [18]. In the context of symbiotic relations between representatives of the animal and plant world, our trophic, informational, reproductive, aesthetic dependence on the fauna of the planet, phytotherapy should be correctly perceived as one of the

the most essential directions of maintaining life on the planet, which cannot be said about drug therapy, about xenobiotics.

The production of a stream of synthetic drugs with a predominantly symptomatic direction of action (reduction of hyperthermia, prevention of seizures, immunosuppressive, hormonal replacement therapy, etc.) often ignores a number of biological laws, does not take into account some basic medical biological theories of G. Selye, L.A. Orbeli, N.V. Lazarev. The result is the subsequent withdrawal from widespread medical practice due to the ineffectiveness of whole groups of drugs with a seemingly verified mechanism of action: myotropic antispasmodics, reflex and direct analeptics, photosensitizers, a number of central and peripheral M and N cholinergic blockers. The vast majority of synthetic, aggressive medicines, the use of which is complicated by numerous side effects, cannot be used as a prophylactic agent that increases a person's resistance to disease-causing effects. In contrast to this, treatment with medicinal plants and their combinations mobilizes many mechanisms of self-defense, limiting the volume and severity of damage even in cases of diseases that are considered difficult to cure.

The aim of this work is to provide information on the high efficiency of herbal medicine in the treatment of patients with ischemic heart disease (IHD) and cerebrovascular disease (CVD).

#### MATERIAL AND RESEARCH METHODS

The research methods hardly merit a detailed description, since the basis was the prospective clinical observation of patients. At the initial and repeated admissions of patients, anamnesis was carefully collected, and a survey about complaints about organs and systems was carried out. The physical examination included not only conventional methods, but lingua, pulse diagnostics, as well as an assessment of the psychoemotional status, neurotization, and the severity of encephalopathy. We always considered the results of instrumental and other diagnostic methods, looked through discharge reports, data on consultations by other specialists. When composing the composition of plants, the severity of the course of the disease was taken into account (the more severe the disease, the more polycomponent the collection is - the rule of traditional medicine), constitutional features, age, sex, marital, social status, work capacity,

For the phytotherapist, there should be no concept of "comorbidities" requiring less (or no) attention. Since IHD and CVD mainly affect elderly people, we took into account the constellation of diseases, paying, for example, attention to the state of the hepatobiliary system (hepatoprotectors in Tibetan medicine are required to normalize the functions of the "queen of organs" - the liver), using laxatives for constipation or moderately laxative plants, since it is well known that difficulties in defecation provoke vascular catastrophes. The use of "evacuators and purifiers" is clearly developed and is not accidentally prescribed by "Zhudshi" as the best of medical prescriptions [30, 31]. The rule is the individual selection of the components of the collection, its personification. The appointment of typical fees, practiced by many phytotherapists, takes us into templating, brings you closer to the drug "gold standards", but such herbal medicine is better than none. Poisonous plants were not used in the collections.

Plasticity in the selection of collection components should also apply to the methods of preparation of infusions, which the patient takes on an outpatient basis for months. So, their complication, the use of a water bath most often leads to the rejection of herbal medicine. The need for the convenience of daily preparation, the tips of the patients led to the fact that in most cases we recommend (the insert, which also contains the composition of the collection), that they should be soaked every night in an enameled pan without chips 2-3 tablespoons of crushed raw materials (stirring is possible) in 1 liter water, boiled quickly, then 5-7 min

simmered the infusion over low heat, poured everything with raw materials into a thermos, insisted during the night. Only infusion in a thermos does not provide sufficient extraction, judging by the color and taste of the infusion, but it is sometimes possible in the absence of conditions for heat treatment: business trips, hotel conditions (such infusion is better than none). The amount of water, tablespoons of collection is considered individually in accordance with the patient's weight, his ability to drink fractionally 1 liter of infusion, but in most cases, the proposed method suits everyone.

The frequency of the reception should be specifically stated. Taking into account the time zones of the canals opening, some authors select mini-fees for each of them, which is almost impossible for the patient to perform. When recommending frequent receptions of the infusion before meals, in the interdigestive intervals, we rely on trust in the selection of the necessary by the body. The precedent of presentation is important, i.e. multicomponent collection. We recommend working patients to take a thermos with infusion (tea) to work.

Nuances:

1. Some patients are particularly sensitive to very mild diuretic the action of the fees, and therefore we do not recommend taking the infusion at night, we reduce the amount of diuretic dehydrates in subsequent fees.

2. Very rarely charges provoke epigastric discomfort, moderate heartburn, and therefore, we recommend taking them after meals.

The registration of the effectiveness of phytotherapy was carried out primarily clinically, taking into account its assessment not only by the doctor, but also by the patient, as well as the generally accepted methods of ECG, bicycle ergometry, lipid spectrum analysis, blood pressure control, duplex scanning and others - if possible and necessary. Observations of limited model groups are given, however, the 50 and 20-year experience of the authors of phytotherapy for patients with essential hypertension, coronary artery disease, CVD provides grounds for identifying the main directions, targets, generalizing conclusions about its effectiveness, recommended methods, and plant arsenal of their combinations. Unfortunately, the progress of apparatus, biochemical diagnostics leads to underestimation of the clinical approach to the tactics of patients' therapy. Observations of a doctor are not a precedent for "evidence-based" medicine, but as a result, analyzes are treated.

**RESULTS AND DISCUSSION** Ischemic heart disease, cerebrovascular disease is quite justifiably referred to as typical psychosomatic diseases, initiated and supported mainly by environmental, social factors. In their pathogenesis, there is a significant decrease in the patient's stress resistance, associated functional and morphological disorders of the arterial blood supply to the heart (the stage of stress depletion), most often against the background of hypertension in combination with atherosclerosis of the coronary, cerebral arteries.

Recently, hypertrophied attention has been paid specifically to lipid metabolism, and when even minor violations of it are detected according to new low rates without any clinical manifestations, cardiologists, neurologists, according to the prescribed standard, prescribe anti-atherogenic (statins), antiplatelet therapy (aspirin, Plavix). Leaving aside the question of the limited (about 30%) uncontrolled efficacy of antiplatelet agents in relation to a particular patient, let us pay attention to the vicious practice of "treatment of cholesterol analyzes".

It is this complaint that is often presented by relatively safe patients as the main one: "I have high cholesterol. The doctor said that it threatens me with a heart attack. " This is a typical example of iatrogeny. Only total cholesterol (TC) was determined in the patient, which was normal (6.2 mM / L) according to the norms that were still in force recently, but now exceeds the recently introduced ones (5.2 mM / L). A commercial component is quite suspected of this juggling with norms: an increase in the prescription of statins for a long time,

prescribed as mandatory. When performing a complete lipidogram with the determination of low density lipoproteins (LDL) and very low density (VLDL), their relationship with the antiatherogenic fraction of high density lipoproteins (HDL) according to the coefficient of atherogenicity (CA), it turns out that the patient does not have any dyslipidemia, but there is moderate neuroticism, caused by the threat of a doctor. Moreover, it turns out that while limiting the time of initial and repeated contact with the patient and the need to create an electronic version of his reception, a detailed collection of anamnesis, there were no complaints at all. One will involuntarily recall the edification of the 12th century in the main treatise of Tibetan traditional medicine "Chzhudshi": "Before feeling the patient, talk to him."

Understanding the systemic nature of the pathological process of dysfunction and morphology of blood vessels, we often reveal manifestations of atherosclerosis not only of the coronary, but also of the cerebral and femoral arteries, and the aorta. In these typical cases, it is correct to perceive this as systemic 2 and 3-basin manifestations of insufficient blood supply, but each of them should be in the department of different doctors: a cardiologist, a neurologist, a surgeon, which does not lead to coordinated treatment of the patient. Neurologists called ischemic brain disease cerebrovascular disease (CVD) with divisions into discirculatory encephalopathy and thrombo-occlusive lesions of the brachiocephalic arteries.

For proof consistency process cite results 5years old drug treatment in the angioneurological center (headed by Professor VA Sorokoumov) of patients with CVD who have undergone non-disabling ischemic stroke, in comparison with massive herbal medicine of the same duration (Table 1). Phytotherapy with multicomponent individually selected collections was carried out according to previously published rules [4, 5, 6]. Its frequency was at least 3 courses (9-10 months a year), but more often it was constant. Occasionally treated patients were excluded, even with positive results of herbal medicine. In patients with CVD against the background of drug therapy, myocardial infarction was observed in 27%, which confirms the systemic nature of the pathological process and the possibility, again, of a systemic positive effect of phytotherapy on coronary and cerebral circulation.

Table 1

Comparative assessment of the effectiveness of drug treatment and herbal medicine patients with hemodynamically significant thrombo-occlusive lesions of the brachiocephalic arteries

Pathology	Medication therapy		Phytotherapy	
	n	%	n	%
Total sick	107	100	41	100
Repeated strokes	56	52.3	0 *	
Myocardial infarction	29	27.1	0 *	
Transient ischemic attacks	19	17.8	4*	9.7
Total disorders of cerebral and coronary circulation	104	97.2	4*	9.7

Notes: \* - differences with control are statistically significant at p <0.05–0.001.

Against the background of drug therapy, more than half of the patients with CVD observed by neurologists suffered from recurrent stroke, and more than a quarter from myocardial infarction. Obviously, in parallel, they had to receive cardioprotective therapy. Such a combination is quite possible when phytotherapy is carried out by one specialist, taking into account all the nuances of diseases in a particular patient, but within the framework of the existing system

In health care, such patients are (but more often not) managed separately by a neurologist and a cardiologist. Further, according to the proverb: "At seven nannies ...". The results are shown in table. 1, demonstrate the undoubted advantage of herbal medicine in the prevention of vascular catastrophes, in particular strokes and myocardial infarctions in patients not only with CVD, but also with coronary heart disease. In the recent past, transient ischemic attacks (TIAs) were called dynamic disorders of cerebral circulation, the acute neurological symptoms of which disappeared even without the provision of urgent care. Obviously, TIA should be regarded as pre-stroke stigma. A highly significant decrease in them against the background of phytotherapy in comparison with drug therapy indicates the advantage of the first and the need for a systematic, long-term implementation of it,

A few words (without detailed characteristics) about the specific main medicinal plants used to prevent strokes and myocardial infarctions. In the overwhelming majority of cases, in the onset of ischemic heart disease and CVD, as well as in provocateurs of myocardial infarction, acute cerebrovascular accidents, we have persistent and sudden stresses. It was Russian phytopharmacologists who worked out stress-limiting phytotherapy, including the use of classical phytoadaptogens [13, 14], which, in addition, have antidestructive, cardio, cerebroprotective, vaso-strengthening, metabolism-correcting action, in general, mobilizing the mechanisms of limiting the volume and preventing the severity of destruction [2, 4, , 20, 21, 34]. M. Plots (1963) in large contingents identified the most vulnerable social groups affected by "coronary disease" [23], which is quite applicable to the CVB. These are, first of all, businessmen, politicians, heads of large and other enterprises and campaigns. The term "directors' disease" has settled down in relation to coronary artery disease, CVD and hypertension.

With severe socio-economic pressure, we are witnessing a sharp increase in their incidence among wider segments of the population. No therapy can eliminate this pressure, but herbal medicine can weaken its effects somewhat. For this reason, stress-limiting plants must be present in the collection. This trend is characteristic of many plants, including classical phytoadaptogens. There is a bias against the contraindications of classical phytoadaptogens in hypertension, coronary artery disease, CVD. However, an analysis of the formulation of Chinese traditional medicine [12, 32] and a number of other sources allows us to note that in the treatment of patients with these diseases, not only ginseng is used, but even a plant with the most pronounced stimulating properties - *Schizandra chinensis*, *Shizandra chinensis*. For this reason, in our own practice, as part of some multicomponent collections (600-700 g), we use 20 g of the root of *Eleutherococcus prickly*, *Eleutherococcus senticosus*, less often also 10 g of the root of *Rhodiola rosea*, *Rhodiola rosea*, root or / and leaves of *Leuzea safflower*, *Rhaponticum carthaimoids*, *Aralia high root*, *Aralia elata* - depending on the specific situation. Classic phytoadaptogens, like many other plants, act depending on the background, providing primarily anti-asthenic, tonic, tonic, stress-limiting effect. *Valerian officinalis*, *Valeriana officinalis* - "the root of health" (the same root is the name of health science - Valeology) is not a CNS depressant, it increases mental performance and physical endurance, has an anti-asthenic effect and complements the tape of classic phytoadaptogens. The effectiveness of phytoadaptogens refutes the rule imposed on us to use mainly tranquilizers that depress the central nervous system as stress protectors.

From the group of so-called moderately soothing, sedative plants, we first of all use the narrow-leaved fireweed, ivanchai, *Chamerion angustifolium*, which, according to the observations of the great Armenian physician encyclopedist Amirdovlat Amasiatsi (15th century, 190), "allows a wild animal to be made tame". Ivanchay is not toxic, it can be used in any

quantities, its resources are inexhaustible, since it aggressively fills abandoned agricultural lands. In combination with other plants, ivanchai really allows you to achieve a socializing effect in angry, dominant, negative, aggressive people. With a decrease in outbreaks of aggression, the number of TIA and angina attacks sharply decreases. According to our experimental data, the infusion of unfermented leaves of fireweed exhibits a distinct stress-limiting effect, reducing the amount of erosion of the gastric mucosa (an element of the Selye triad in the stage of stress depletion) and "melting" of the spleen in mice under immobilization stress. Green leaves are more active than fermented ones. The inaction of the Ministry of Health, which does not take measures to introduce a well-studied, non-toxic, fireweed widely used in folk medicine, is condemned by a number of authors [11, 12, 24, 29],

In the block of plants that act as a sedative (anti-anxiety), we include the flowers of the Forest Kupyra, *Anthriscus sylvestris*, a detailed description of which is given in the monograph "Medicinal properties of spices" [5]. Motherwort species, *Leonurus* need no further comment. To enhance the sedative effect (with agitation, insomnia, anxiety, menopause), we turn on the shoots of Marsh Ledum, *Ledum palustre*; hop cones, *Humulus lupulus*; walnut leaf, *Juglans regia*; oversight part of Cyanosis blue, *Polemonium caeruleum*; Coriander seed, *Coriandrum sativum*; Oregano, *Origanum vulgare*. The inclusion of ethereal substances (lemon balm, mint, thyme, zizifora, elsholzia, anise, star anise, monarda, etc.) is essential, since they not only improve the taste and smell of the infusion (perfume), but positively correct the mood.

The introduction of the concept of "mood modulators" into the practice of phytotherapy, their widespread use significantly expands the possibilities of treatment with plants, in contrast to the use of synthetic tranquilizers, anxiolytics, antidepressants, stimulants. The variations in stress-limiting plants for specific situations are innumerable. For example, attacks of angina pectoris began and were provoked by a severe but timely menopause, which obliges the phytotherapist to contribute to the extinction of ovarian functions, reduce the period of hot flashes, neurosis (black Poplar kidneys, *Populus nigra*; supervised part and root of Comfrey officinalis, *Symphytum officinale*; Lungwort unclear, *Pulmonaria obscura*; rhizome of Calamus marsh, *Acorus calamus*, etc.).

A few words about hypotensive plants. In most cases, IHD is combined and is a consequence of hypertension (HT), which is not accidentally called "killer number one". Objective: to reduce the frequency and height of hypertensive crises, and with a constantly high blood pressure to assist with antihypertensive drugs, analyze the correctness of their appointment, reduce toxicity, and increase efficiency.

Without loading the article with a listing of dozens and even hundreds of medicinal plants prescribed in traditional and folk medicine for hypertension, we will cite only those that, with our limited capabilities, we use in our own practice. These are, first of all, Marsh Tush, *Gnaphalium uliginosum*; C. forest, *G. sylvaticum*. For the first, not only the ability to correct the blood pressure level has been proven, but also to optimize the regeneration processes, for example, in case of peptic ulcer disease (ulcerin drug). Blueberry shoots, *Vaccinium myrtillus*; blueberries, *Vaccinium uliginosum* are known not only for their effect on the mobilization of antihypertensive metabolites, but also for insulin, a moderate diuretic effect, essential for Na-dependent hypertension, and normalization of lipid metabolism. Their berries are recommended to be included in the diet to achieve normalization of blood pressure, which in the season is made sick,

The task of nutritionists, therapists, cardiologists is to suggest effective methods of phyto-diet therapy to patients. The medicinal properties of many berries are due to the biological law of conservation, health promotion of distributors, and a positive effect on their reproductive functions. In the gastrointestinal tract of animals, the seeds of berries increase germination (enzyme-acid stratification), and the pulp of fresh berries weakens, providing, in addition, a number of healing effects. Thus, animals expand the range of plants, and they, in turn, have a preventive and curative effect in relation to distributors, from which plants have not yet excluded humans. Less commonly, we use non-toxic plants such as the white mulberry leaf, *Morus alba*; White birch, *Betula alba*. Herbal diuretics are less toxic than lasix, hypothiazide, and do not cause potassium deficiency, since they themselves supply it together with almost the entire periodic table. Against the background of the mineral composition of plants, asparkam looks pitiful, but at least it is harmless.

I would like to draw special attention to a relatively exotic plant that does not grow in the middle lane and in the North-West of Russia, the fruits and leaves of which have been successfully included in the block of hypotensive plants for decades. These are *Zizyphus jujuba*, Unabi, "Chinese date", "breast berry" - an elite plant of traditional medicine in Asian countries, which is also used as an anti-neurotic agent. Thus, in Chinese traditional medicine it is recommended to include the fruits of unabi in the collection for neurasthenia, hysteria [16, 27], ie. with neuroses, which often occur with transient increases in blood pressure and are rightly regarded as stage 1 hypertension. The fruits are edible, the leaves are a surrogate for tea. In clinical trials in the USSR, the plant was recognized as the best in the treatment of patients with hypertension, which we can confirm by our own experience. Choi Taesop, based on the centuries-old experience of using unabi in Korean traditional medicine, he recommends autumn leaves of the plant for hypertension [32]. In our own practice, we include 10–20 g of leaves and fruits of unabi in a block of hypotensive plants. Enthusiasts who have grown several thousand unabi trees systematically supply us with leaves and fruits (S.N.Bambakov). It was on their initiative that a wide survey of publications devoted to unabi was compiled [7].

Amirdovlat Amasiatsi called the Lesser Periwinkle, *Vinca minor*, "the great staff of the old men" (as if translated from Turkic), today the source of vinpactine, cavinton, supposedly selectively improving brain perfusion. Cavinton, a myotropic spasmolytic, like papaverine, blocks phosphodiesterase and is no different from papaverine in terms of the ineffectiveness we observe. Such a common name for periwinkle is significant for the reason that although it is believed that cardiovascular diseases have "gotten younger", they still mainly affect the elderly and old people. Other alkaloid plants are Basil species, *Thalictrum*. We include alkaloids in the block of hypotensive plants in especially stubborn cases.

The famous scientist, doctor A.S. Zalmanov, who treated V.I. Lenin and members of the Ulyanov family, like the great pathanate Rudolf Virkhov, focused attention on the role of the vascular component in the pathogenesis of any disease and considered the formation of an atheromatous plaque as a kind of protective, adaptive process in case of emerging artery failure [15]. This very reasoned approach to the treatment of patients with coronary artery disease and hypertension prompts the phytotherapist to focus on plants as vasoprotectants. At the beginning of the twentieth century, the phytochemist Saint Györgyi isolated yellow substances from lemon (then pure rutin), which he called citrines, and today - flavonoids. Subsequently, to enhance the vasoprotective effect, ascorbic acid - ascorutin was added to the routine (was it worth it to disconnect?). An example Sent Gyordi would have been reported to teach something to our drug-makers who are striving to isolate the "active substance" from the plant, discarding all the rest as ballast. Sent Gyordi found that lemon juice is superior in effectiveness to rutins, askorutin.

We have experimentally established that galenic preparations (infusions, decoctions,

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extracts) more than 80% of non-toxic medicinal plants have a significant vasoprotective effect, neutralize stress-induced violations of vascular permeability [2, 8]. Unfortunately, no one asks why this is so? A vasoprotective effect is exerted not only by flavonoids, but to an even greater extent by tannins, as well as anthocyanins, phenol carboxylic acids, and some coumarins. Such a safety net for the protection of our vessels by plants using many metabolites should also be, albeit not explained, but taken into account by phytotherapists. It is intuitively mastered by traditional medicine, operating with multicomponent collections, including various blocks of plants. Considering the background level of vasoprotective (as well as antioxidant, anti-inflammatory, hepatoprotective, positive gonadotropic and other) properties of plants, one should not, as it were, worry about having them in the collection. Nevertheless, let us single out the dominant vasoprotectors in our collections, which, of course, exhibit an even wider range of medicinal properties: the peel of the Noble Mandarin, *Cytrus nobilis*; Black chokeberry, *Aronia melanocarpa*; Meadowsweet (meadowsweet) visleaf, *Filipendula ulmaria*; St. John's wort, *Hypericum perforatum*; Highlander serpentine, *Polygonum bistorta* (and many other types of Highlander); Verbeinik species, *Lysimachia*; Geranium, *Geranium*; Mountain ash, *Sorbus aucuparia*; flowers and fruits of blood-red hawthorn, *Crataegus sanguinea*, etc. The high efficiency of the latter in IHD and insufficient blood supply was emphasized by the Bulgarian authors [17]. The vasoprotective effect is manifested not only in the protection of arteries from atherosclerotic plaques, but also in improving the perfusion of the heart and brain [4, 6]. Blood-red hawthorn is recommended to be combined with plants containing cardiac glycosides, with foxglove, but in our case it is desirable with cardenolides containing non-cumulative short-acting cardenolides (adonis, lily of the valley, jaundice, lilac). Each of these plants exhibits more than just cardiotoxic properties. So, *Adonis vernalis* has a pronounced diuretic effect even with ascites, "with serous accumulations in the belly", which was the beginning of the history of its study by N.A. Bubnov [10] on the recommendation of S.P. Botkin. Academician V.N. Bekhterev used it for epilepsy [10] (mixture of adonisbrom), and although it does not have an anticonvulsant effect, it is undoubtedly effective in neuroses and epilepsy. containing cardiac glycosides, with foxglove, but in our case, preferably with non-cumulative short-acting cardenolides (adonis, lily of the valley, icterus, lilac). Each of these plants exhibits more than just cardiotoxic properties. So, *Adonis vernalis* has a pronounced diuretic effect even with ascites, "with serous accumulations in the belly", which was the beginning of the history of its study by N.A. Bubnov [10] on the recommendation of S.P. Botkin. Academician V.N. Bekhterev used it for epilepsy [10] (mixture of adonisbrom), and although it does not have an anticonvulsant effect, it is undoubtedly effective in neuroses and epilepsy. containing cardiac glycosides, with foxglove, but in our case, preferably with non-cumulative short-acting cardenolides (adonis, lily of the valley, icterus, lilac). Each of these plants exhibits more than just cardiotoxic properties. So, *Adonis vernalis* has a pronounced diuretic effect even with ascites, "with serous accumulations in the belly", which was the beginning of the history of its study by N.A. Bubnov [10] on the recommendation of S.P. Botkin. Academician V.N. Bekhterev used it for epilepsy [10] (mixture of adonisbrom), and although it does not have an anticonvulsant effect, it is undoubtedly effective in neuroses and epilepsy. Each of these plants exhibits more than just cardiotoxic properties. So, *Adonis vernalis* has a pronounced diuretic effect even with ascites, "with serous accumulations in the belly", which was the beginning of the history of its study by N.A. Bubnov [10] on the recommendation of S.P. Botkin. Academician V.N. Bekhterev used it for epilepsy [10] (mixture of adonisbrom), and although it does not have an anticonvulsant effect, it is undoubtedly effective in neuroses and epilepsy. Each of these plants exhibits more than just cardiotoxic properties. So, *Adonis vernalis* has a pronounced diuretic effect even with ascites, "with serous accumulations in the belly", which was the beginning of the history of its study by N.A. Bubnov [10] on the recommendation of S.P. Botkin. Academician V.N. Bekhterev used it for epilepsy [10] (mixture of adonisbrom), and although it does not have an anticonvulsant effect, it is undoubtedly effective in neuroses and epilepsy.

The overwhelming majority of the plants listed by us are metabolism correctors that mobilize our own metabolites. This direction is being sluggishly developed, since it is more customary to look for the mechanisms of the substrate action of substances contained in plants on receptors, enzymes, target cells, and points of application. Theory of the state of nonspecifically increased body resistance (SNPS) N.V. Lazarev, one of the main biomedical theories [20, 21], is often ignored. No emphasis is placed on the essential role of informational influence by the flow of natural compounds [12], which has been fully mastered by homeopathy, and even earlier by traditional medicine.

Confirmation of the most significant mechanisms of action of medicinal plants, consisting in the mobilization of self-defense, are data on the increase in *Rhodiola pink* production of testosterone [25] and endorphins, the ability of classical phytoadaptogens to modulate the production and duration of action of the lymphocyte-activating factor, interferon  $1\beta$  [33], mobilization (in experiment and clinic) infusions of multicomponent collections of antioxidant activity, rapid reaction enzyme - superoxide dismutase, HDL production - antiatherogenic protection and, in this regard, the achievement of a decrease in LDL, VLDL, CA [6,8]. The last result, registered specifically in patients with coronary artery disease, is shown in table. 2.

table 2

Comparative assessment of the dynamics of the lipid spectrum of blood against the background of phytotherapy and drug therapy in patients with coronary artery disease



Group and number sick	Indicators	Original level	2 months later therapy	Difference in percents	P value
Phytotherapy infusions of poly component fees, n = 45	HCS mM / L	6.59 ± 0.52	5.98 ± 0.41	9.2%	<0.05
	TG mM / L	2.38 ± 0.42	1.79 ± 0.36	24.8%	<0.001
	HDL cholesterol mm / l	0.97 ± 0.12	1.12 ± 0.14	+ 15.5%	<0.001
	HSLPNP mm / l	4.53 ± 0.31	4.04 ± 0.29	10.8%	<0.05
	HSLPONP mm / l	1.09 ± 0.18	0.82 ± 0.12	25%	<0.05
	CA	5.79 ± 0.91	4.34 ± 0.60	25%	<0.001
Control group. Medication vasoactive therapy, n = 30	HCS mM / L	6.46 ± 0.59	6.65 ± 0.49	2.9%	> 0.05
	TG mM / L	2.56 ± 0.55	2.45 ± 0.49	4.3%	> 0.05
	HCLPVP mm / l	1.05 ± 0.12	1.01 ± 0.11	3.8%	> 0.05
	HSLPNP mm / l	4.23 ± 0.5	4.51 ± 0.37	+ 6.6%	> 0.05
	HSLPONP mm / l	1.18 ± 0.25	1.13 ± 0.24	4.2%	> 0.05
	CA	5.15 ± 0.73	5.58 ± 0.79	+ 8.3%	> 0.05

Note: differences in all lipid profile indicators after 1.5-2 months after phytotherapy and drug therapy are statistically significant at p <0.05-0.001.

The results obtained confirm the correctness of considering medicinal plants as natural correctors of our antiatherogenic defense, mobilizing HDL production and, in connection with this, reducing CA by 25%, the summing indicator of dyslipidemia. It does not reach the upper limit of the normal value (4.0), but approaches that. At the same time, in this case, we must take into account the short duration of the corrective effect of phytotherapy on lipid metabolism, realizing that in such a short time it was difficult to expect its complete normalization. Against the background of medical coronary artery disease, antiplatelet and vasoprotective therapy, CA even increased. Reducing the concentration of TC, LDL, VLDL and CA is not the dominant goal, as is, unfortunately, prescribed by doctors of clinics, cardiologists who are obliged to prescribe hepatotoxic statins, following a certain almost a "gold" medical standard. It is essential that herbal medicine, in contrast to them, does not cause any side effects, in particular, medicinal hepatitis.

Hepatoprotective properties, as well as vasoprotective ones, are background for non-toxic, food, edible, spicy aromatic plants, tea surrogates and protect hepatocytes, liver detoxification function from CCL4 action in more than 80% [2, 3]. This phenomenon also requires understanding from the standpoint of biological laws, which is fundamentally done, for example, by traditional Tibetan medicine, which considers the liver to be the "queen of organs" and prescribes the inclusion of plants that protect it in multicomponent collections.

Since a phytotherapist most often has to provide assistance to patients with CVD, coronary artery disease, taking a large number of synthetic, toxic, aggressive medications ( $\beta$ -blockers, ACE and calcium channel inhibitors, myotropic antispasmodics, statins, tranquilizers, nitrites, diuretics, etc.), which are not you can always cancel, all the more abruptly, it is necessary to include in the collection of plants that increase the detoxification function of the liver, have a detoxifying effect "with the poisons" [30, 31]. Here are some of them, systematically applied in our own practice. A more detailed consideration of antivenom medicinal plants is given in a special monograph [3].

Turmeric zedoaria, *Curcuma zedoaria*, about which Amirdovlat Amasiatsi, citing a specific example, wrote that it is effective even in acute lethal poisoning with aconite, enjoys a reputation as a powerful detoxifying agent. In Tibetan traditional medicine, *C. long*, *C. longa* is popular in the same capacity. Unfortunately, the rhizome of turmeric is almost not assimilated by scientific European medicine, except as a choleric agent. At the same time, again, there is a tendency for the destruction of the unmodeled natural complex and the release of curcumin from the rhizome. The combination of powerful antidote, hepatoprotective, choleric (cholegoga et cholericum), antioxidant and a number of other properties in turmeric comes in handy for chronic, sometimes lifelong inoculation of the patient with numerous toxic xenobiotics.

Turmeric belongs to the Ginger family. Actually, Medicinal ginger, *Zingiber officinalis* is an elite plant of traditional medicine in Asian countries [12], universal, including an antidote medicine. It is usually combined with the root of the Ural licorice, *Glycyrrhiza uralensis* [16], which is the leader among elite plants in traditional medicine in East Asia, is the most powerful detoxifier, immunomodulatory, anti-inflammatory, antiatherogenic plant, regulator of endocrine gland functions. In terms of assimilation of methods and arsenal of traditional and folk medicine, the frequent use of the combination of licorice with ginger in multicomponent preparations is worthy of assimilation.

The Ginger family also includes *Elettaria cardamomum*, often used in traditional medicine, whose fruits, like ginger and turmeric, are a spice. Cardamom, for example, reduces the toxicity of very strong Turkish coffee. Nutritionists could follow the path of expanding the patient's diet by including berries, food, small doses of medicinal spicy aromatic plants, tea surrogates instead of total bans, and the implementation of dietary violence (diet No. 5, ward No. 6). These plants are, of course, metabolic correctors. So, licorice mobilizes all anti-atherogenic defense mechanisms. It is logical that the infusions of multicomponent charges quite quickly initiate progress towards the normalization of lipid metabolism in patients with coronary artery disease, which follows from the lipid profile (Table 2).

A similar, but less pronounced antidyslipidemic effect of phytotherapy was observed in patients with CVD with thrombo-occlusive lesions of the brachiocephalic arteries. The content of TG in the blood significantly decreased from 1.53 to 1.37 mM / L, LDL - from 3.74 to 3.79 mM / L, but the anti-atherogenic protection index of HDL increased from 1.46 to 1.76 mM / L. The indicators of total cholesterol and CA did not change, and the initial level of the latter was normal - 2.76 mM / L (phytotherapy does not change the normal indicators of lipid metabolism). In the same patients, vasoactive drug therapy did not affect the lipid spectrum.

Today's over-enthusiasm for "treatment of analyzes", "cholesterol treatment" should not overshadow the main task of the doctor - to achieve a clinical effect, to help patients with regard to the reduction of basic complaints, to prevent vascular catastrophes. With prolonged phytotherapy, it is possible to lead the patient to the restriction and even complete abolition of coronary aromatics, in particular methemoglobin-formers of nitrates, but it should be understood that biologically unattainable results cannot be provided by any, including phytotherapy, especially with the late treatment of already disabled patients noted by all. Against the background of only the first course, it is possible to reduce the number of pain attacks in patients with coronary artery disease, which they note as a clear efficacy of herbal medicine (Table 3).

Table 3

Frequency of angina attacks per week in patients  
with I, II, III functional class of angina before and after a 3-month course  
herbal medicine

Functional angina class	Quantity sick	Quantity attacks per week before herbal medicine	Quantity attacks per week after herbal medicine	P values
Class I	12	5.4 ± 2.1	2.2 ± 1.0	<0.05
Class II	56	18.6 ± 4.0	6.7 ± 1.6	<0.001
III class	22	34.5 ± 5.6	22.5 ± 6.3	<0.05

Note: Mean values are given ± confidence interval.

It is quite difficult to objectively assess not only the frequency, but the duration and severity of angina attacks (within the framework of the so-called "evidence-based medicine"), and therefore one has to rely on the assessment of these indicators by patients. They also argue the reduction of nighttime attacks, in this regard, an increase in productivity, sleep duration, endurance, performance, expansion of self-care opportunities. All this is considered to be an improvement in the quality of life. However, it should be noted that significant positive progress can be achieved only with long, multiple courses of herbal medicine. A significant decrease in angina attacks in patients with coronary artery disease is consistent with the high efficiency of phytotherapy in patients with CVD, a demonstrative decrease in the number of transient ischemic attacks (Table 3).

In some patients who have had strokes, heart attacks, a negative attitude necessitates lifelong herbal medicine. But why statins, antiplatelet agents, little meaningful combinations of potassium and magnesium, magnesium and aspirin can be prescribed for life, but life-long drinking of tea from plants that also reduce the toxicity of the "poisons of civilization" is impossible? The introduction of teas from medicinal, fragrant, ethereal plants into the diet often occurs without the advice of doctors, at the initiative of the patient himself. The composition of such tea (multicomponent collection) selected by a specialist phytotherapist for a specific person, taking into account complaints, constitution, gender, age, social, marital status, exposure to ARVI and much more, should certainly be regarded as an element of a healthy lifestyle. Of course, such teas are shown primarily to sick people,

The preventive value of herbal medicine is undeniable. Table 3 shows data confirming the clinical effect of phytotherapy in reducing angina attacks by 2.5-2.8-1.5 times, according to its functional classes. In some cases, it is possible to reduce the class of angina pectoris.

Patients note not only a weakening of the intensity of pain, but also a higher activity of nitroglycerin and even validol, valocardin, corvalol in relieving seizures. This phenomenon of elimination of unresponsiveness to drug therapy against the background of phytotherapy is observed not only in relation to coronary artery disease, but also in relation to antihypertensive, diuretic drugs, cardiac glycosides. So, hawthorn restores and increases sensitivity to the latter.

With regard to menthol-containing medications: doctors directly suggest to patients that they are ineffective. In cases of relief of angina pectoris, noted by patients, cardiologists, therapists speak of cardioneurosis, autosuggestion. At the same time, not one of our thousands of patients was properly instructed on how to take validol, corvalol, valocardin. There is no understanding that they act from the cold receptors of the mouth, i.e. reflexively, and not resorptively, and therefore, having rinsed the mouth with a solution of valocardin, corvalol, putting validol under the tongue, one should breathe through the mouth, feel the coolness. With the correct explanation to patients of taking these drugs, more than 50% of them note the relief of an attack of angina pectoris, which excludes the placebo effect, suggestion. Finally,

would have an effect. It is clear that with a sharp limitation of the time of contact with the patient, there is no question of any explanation of the rules for taking the drug, the mechanism of its action (especially if you do not know it). The inclusion of menthol-containing drugs in the palette of coronary aromatics, which the great S.P. Botkin has successfully used it even with biliary colic, reduces the need for the appointment of toxic nitrates. In our own practice, including in the collection mint, lemon balm, lavender, thyme, we recommend rinsing it with infusion of the mouth before ingestion, breathing through the mouth, which is essential not only for the reflex coronarolytic effect, but also for the sanitation of the oral cavity.

When registering the effectiveness of treatment of patients with coronary artery disease, it is usually specified how much the distance covered without respite has increased, the ascent to which floor without it. One of the objectifying methods of increasing endurance, exercise tolerance in a patient with coronary artery disease is the generally accepted method of bicycle ergometry. Bicycle ergometry with the use of electrocardiographic registration made it possible to establish the reliable effectiveness of herbal medicine (Table 4). Thus, apparatus, biochemical, and most importantly clinical methods allow us to assert the need for the inclusion of massive herbal medicine (intake of teas, infusions of multicomponent, individually selected collections) in the complex therapy of patients with coronary artery disease.

Table 4

Stress test data for bicycle ergometry before and after herbal medicine

Parameter	Number sick	Before herbal medicine	After herbal medicine	P values
Load (W)	33	91 ± 3.3	102 ± 2.7 *	<0.05
Duration (min.)	33	7.3 ± 0.22	8.5 ± 0.38 *	<0.05
Displacement amount ST (mm)	31	1.58 ± 0.21	0.76 ± 0.42 *	<0.05

Note: Mean values are given ± confidence interval.

Positive results were obtained when comparing blood pressure in patients with essential hypertension. The tendency towards normalization of blood pressure was manifested in a significant decrease in it compared to the initial levels, reduction and disappearance of severe hypertensive crises, which in many were combined with attacks of angina pectoris, effective relief of cephalgia. With a 2-month follow-up of patients with coronary artery disease against the background of PT, a significant decrease in blood pressure was recorded from  $150 \pm 5/95 \pm 5$  on average to  $134 \pm 4/84 \pm 5$  in the absence of such against the background of drug therapy: initial  $150 \pm 6/94 \pm 5$ , after 2 months  $147 \pm 6/89 \pm 6$  mm Hg. A distinct antihypertensive effect, more pronounced with prolonged and constant PT, corresponds to the literature data on the effectiveness of multicomponent collections in hypertension [4, 8, 12, 16, 18, 19, 26, 27, 28, 32].

When studying the effect of herbal medicine on the indicators of psychoemotional status in patients with coronary artery disease, a significant decrease in reactive anxiety, an improvement in the data of the SAN questionnaire [8] were noted, which confirms the verbal statements of patients about the sedative, stabilizing effect of infusions of multicomponent preparations, their significant stress-limiting activity. If personal anxiety did not significantly change against the background of drug therapy (45.8–45.6 points) and herbal medicine (46–44.8), then reactive anxiety decreased significantly against the background of the latter (44.4–40.6), without undergoing changes in the control group (43.6–44.2 points). The experience of treating hypertensive patients with stenoses and occlusions of the brachiocephalic [6], coronary arteries, combined 2-basin pathology allows us to note the pattern of hypotensive,

with massive and long-term herbal medicine, significant positive changes in psychoemotional status, cognitive-nesthetic functions.

Antiplatelet effect of long-term herbal medicine sick with stenoses brachiocephalic arteries manifested itself in a significant decrease in the number of platelets involved in aggregates (from 9.13 to 6.54%), as well as in the number of small (3.7-3.0), medium + large aggregates (0.3-0.07 ). The method for determining intravascular platelet aggregation has been mastered by few laboratories; therefore, the data presented were obtained on a small group of patients (15), but herbal medicine was effective in all of them, however, significantly inferior to hirudotherapy. The results of duplex scanning of cerebral arteries boil down to the fact that atheromatous plaques against the background of phytotherapy cease to be embologic, concentrate, decrease in size (organize), and stenoses in some cases pass from hemodynamically significant to insignificant.

### CONCLUSION

The above results allow registering reliable, high clinical efficacy of phytotherapy in patients with cardiovascular diseases in relation to the prevention of vascular catastrophes, which is superior to that of drug therapy. Clinical results are supported by the study of some mechanisms of action of massive herbal medicine: reduction of reactive anxiety (stress-limiting effect), reduction of hypertension, normalization of the lipid spectrum, antiplatelet effect, adaptive increase in exercise tolerance, reduction of embologicity and size of atheromatous plaques.

The assimilation of the methods of the arsenal of traditional and folk medicine is recognized by WHO resolutions as one of the priority directions of the development of medicine in the 21st century. If, unfortunately, in Russia, herbal medicine - the basic discipline of traditional medicine for the sake of pharmaceutical companies is classified even as a non-medical activity, then in China, Korea, Japan, Vietnam, India, Tibet, Iran, Tajikistan, Arab countries, in which the vast majority of mankind, herbal medicine, which arose long before writing, continues to develop. It allows to achieve high results in the treatment of patients with many, including cardiovascular diseases, which is confirmed by our data. Genetically, evolutionarily determined by the fact that Homo sapiens in the process of his formation, like other representatives of the fauna, became trope, highly sensitive to plant treatment. This also follows from the biological law that many plants are interested in the health of their distributors.

The high efficiency of herbal medicine is based on the biological law of the unity of the flora and fauna of the planet, their symbiotic relationship. Herbal medicine is not a prerogative of humanity and is rightly considered an integral part of the program for maintaining life on earth. Obviously, the high efficiency of phytotherapy in the prevention of vascular catastrophes in the treatment of patients with ischemic heart and brain disease with the simultaneous treatment of the so-called concomitant diseases dictate the need to introduce it into the complex therapy of this contingent. The presented results of therapy of patients with coronary artery disease and CVD confirm clinically, as well as by the methods of instrumental, biochemical, morphological diagnostics, the high efficiency of phytotherapy, which is economically accessible to all segments of the population and, when its methods are introduced, can contribute to the improvement of the general population.

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