

Diet on hirudotherapy to increase therapeutic effectiveness in hypertanic diseases

N. Fattakhov^{1*}, G. Tillyaxodjayeva¹, M. Akbarova¹, A. Nuriddinov¹, and I. Sakkizboyev¹

¹Fergana Public Health Medical Institute, 2A, Yangi Turon Street, Fergana, 150100, Uzbekistan

Abstract. This article describes the experience of using hirudotherapy with a special diet. Patients were divided into sex and age groups, the effect of such therapy was monitored.

1 Introduction

In the modern world, hirudotherapy is an extremely relevant method of treating many diseases. On the one hand, this is due to a wide range of biotherapy methods, and on the other hand, a high risk of various complications from the use of synthetic drugs. Treatment with medical leeches, or hirudotherapy, is one of the most ancient examples of the use of the healing powers of wildlife in medical practice. Avicenna in his treatise "The Canon of Medicine" paid great attention to medical leeches. Even then, the active use of medical leeches for medicinal purposes began in concussion, kidney, liver, joint diseases, in the treatment of tuberculosis, epilepsy, hysteria and many other diseases [1-3].

Hirudotherapy is one of the most ancient methods of treating various pathological conditions, affecting the rheological properties of blood, lipid metabolism and the human immune system. Treatment with leeches leads to diverse and versatile effects, the main of which are anti-ischemic, neuroprotective, anesthetic, anti-inflammatory and bactericidal.

2 Methods

418 hypertensive patients were under observation in the study. All patients underwent general clinical and instrumental methods of examination.

3 Result and discussion

Analyzing the experience of using medicinal leeches for medicinal purposes, we found the results of numerous studies indicating the high efficiency of hirudotherapy in the treatment of various diseases.

According to studies conducted using hirudotherapy in various fields of medicine (neurology, neurosurgery, cardiology), hirudotherapy has minimal contraindications and side effects, which is very important for elderly and senile patients.

* Corresponding author: nusratullo58@mail.ru

Conducting a study of the literature, we did not find in any of them a mention of a diet during treatment with a medicinal leech. Diet therapy was strictly coordinated with hirudotherapy. Medical nutrition was prescribed in the form of special diets according to the nosological unit of the disease.

We have specially identified patients prone to obesity, a history of hypertension, coronary heart disease and patients with metabolic disorders. We identified a contingent of patients aged 35-45 years. Sometimes diet therapy is the main method of treatment, sometimes it serves as an obligatory medical background, against which all others are applied, including specific and hirudotherapy. Patients with atherosclerosis limited the content of animal fat, cholesterol-containing substances, simple carbohydrates (glucose, fructose), table salt, vitamin D and extractive substances with an abundance of lipotropic factors (cottage cheese, oatmeal, soy, etc.), vitamins C, B1, B6, P, PP, cell membranes (fruits, vegetables), sitosterols, phosphatides (vegetable oils), seafood. In the treatment of patients with hypertension and chronic cardiovascular insufficiency, a diet is used that contains no more than 2-3 g of table salt in products, enriched with potassium, magnesium and vitamins, which has a physiological norm of proteins, fats and carbohydrates. Against the background of this diet, a magnesium diet is periodically prescribed for a short time, designed for the depressant effect of magnesium salts [4-6].

Also noteworthy is the vegetable diet proposed by Caldwell Esselstyn, who has achieved a significant improvement in the condition of many patients with coronary insufficiency.

Patients with metabolic disorders were recommended a diet of dosed consumption of a variety of foods, daily a lot of foods rich in fiber. These are fruits, vegetables, legumes, cereals. All these products are low-calorie, rich in vitamins and minerals. Sweet, muffin, fried - excluded from the menu. All patients were forbidden to drink alcohol, as alcoholic drinks bring extra calories and no nutrients. In the diet recommended to consume more water. Pure water contains 0 calories, and if you drink a glass of water 30 minutes before a meal, then the feeling of satiety will come earlier.

A leech, biting a patient, releases hirudin into his blood and a number of other positive secrets that stabilize the blood coagulation system, have a beneficial effect on the vascular wall, and improve microcirculation.

The use of leeches is the only bloodletting at the level of microcirculation. As a system, it is here that the main metabolic processes of cell vital activity take place.

Medical leech is considered a unique healing agent. Its therapeutic effect results from the finely coordinated and rapid work of the whole complex of organs of this complex built animal. Therefore, proper care of the leech is considered important so that they can provide assistance so that the number of leeches is sufficient to cover all the needs for everyday use in medical institutions.

This leads to improved blood circulation and oxygen supply to all internal organs.

In the treatment of hypertension with leeches, the effect is reduced to a decrease in the volume of blood circulating in the bloodstream and, since the secretion of the salivary glands of leeches has a very significant hypotensive effect, lowering blood pressure. It has been noted that hirudotherapy changes the body's reactivity, resulting in increased sensitivity to ongoing drug therapy. Due to this, it is often possible to reduce the doses of drugs used, and sometimes completely abandon their use [7-10].

Table 1. Distribution of patients by age and sex groups with coronary heart disease.

Age	Gender		Number of patients	Disease	Number of leeches	Number of sessions
	Man	Women				
35-39	132	60	192	Ischemic disease, hypertension, metabolic disorders	5-15	5-9
40-44	150	76	226	Ischemic disease, hypertension, metabolic disorders	5-15	5-9

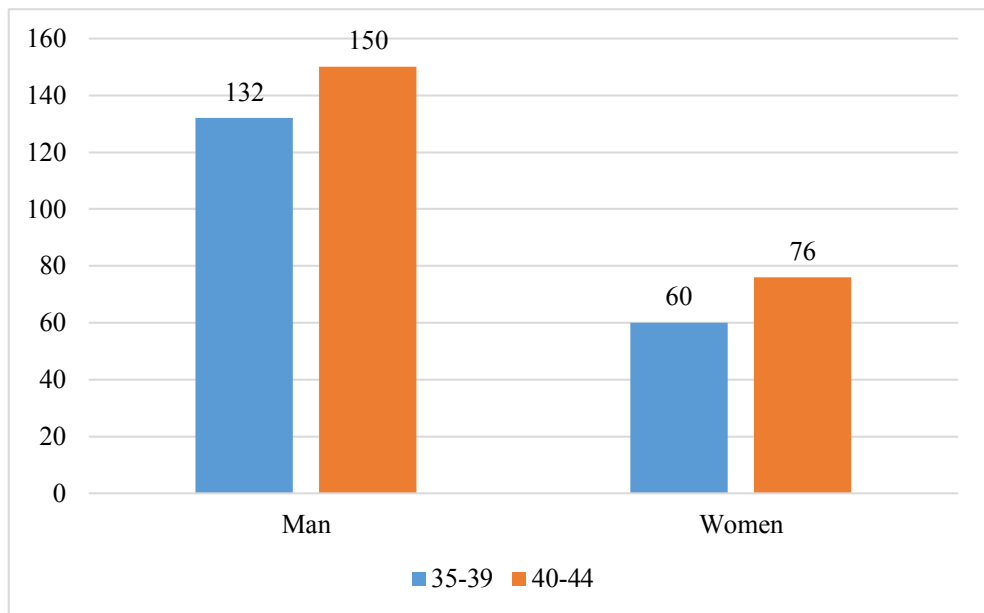


Fig. 1. Distribution of coronary disease, hypertension and metabolic disorders by sex.

Patients aged 35-39 years, including 132 men and 60 women with ischemic disease, hypertension, metabolic disorders after 5-9 sessions in the amount of 5-15 leeches during treatment from 10 days to 1 month with a strictly prescribed diet, general condition improved, the blood coagulation system stabilized, pain in the chest subsided, shortness of breath and abnormal heartbeat disappeared. Blood pressure decreased, mood improved, headaches and dizziness ceased to bother (Fig. 1).

Applied patients aged 40-44 years, including 150 men and 76 women with ischemic disease, hypertension, metabolic disorders, who received 5-9 sessions in the amount of 5-15 leeches in terms of 10 days to 1 month, the general condition improved markedly, pain or discomfort in the arms, left shoulder, elbows, jaw, or back has disappeared. Difficulties in breathing and lack of air were stopped. Nausea, vomiting and dizziness were not observed. The skin turned pink, the patients became more cheerful.

Few patients did not follow the diet we proposed. Their clinical improvement is less pronounced for a longer period, on average, 25-30 days longer than the previous group.

4 Conclusion

Such a diet and hirudin secreted by a medical leech normalizes lipid metabolism, the state of the vascular wall, the coagulation and anticoagulation systems of the blood, the functions of the circulatory apparatus, and other systems.

All groups of patients showed a positive dynamics of the clinical picture and the therapeutic effect came from 5-9 sessions and lasted 3 months. When studying long-term results on an outpatient basis, it was found that a more stable hypotensive effect and, accordingly, a good subjective state is achieved in patients with borderline arterial hypertension. As the results of this study showed, treatment with leeches in compliance with a strict diet improves the general condition of the patient, correcting some pathological processes (inflammation, microcirculation disorders, hypoxia, etc.). Hirudotherapy in compliance with a strict diet interferes with the basic mechanisms of the development of the pathological process, controls the set of reactions arising at different structural and functional levels of the formation of the disease.

Hirudotherapy with a strict diet has a normalizing effect on the vascular-motor center, higher centers of the autonomic nervous system (reflex), which, along with improving the adaptive capabilities of the cardiovascular system, leads to positive changes in peripheral and central hemodynamics. The use of hirudotherapy in various areas of human activity has shown its effectiveness, and even after many centuries it does not lose its relevance.

Hirudotherapy for hypertension has proven itself on the positive side. The especially observed hypotensive effect in the next 6 months after hirudotherapy in the complex treatment of hypertension leaves no doubt and shows the need for its wider use in practice.

References

1. Accumulation of eglin c in rat tissues using a tritium label when administered orally. N. G. Kotlova [et al.]. Clinical and experimental hirudology on the threshold of the new millennium: materials of the 6th scientific and practical. conf. Hirudologists of Russia and CIS countries. ed.: I. P. Baskova, A. N. Kulanin.. Pyatigorsk, 1999. Pp. 114-116.
2. Baskova, I.P. Biologically active substances produced by the medicinal leech and their mechanisms of action: author. dis. ... Dr. Biol. Sciences. Baskova I.P. Moscow, 1986. Pp. 17-18.
3. Baskova I. P., Hirudotherapy, I. P. Baskova, V. G. Borodin, K. G. Seleznev, Guidelines for practicing doctors. Moscow, 1990. P. 23
4. Gantimurova, O. G. Hirudotherapy in the treatment and rehabilitation of patients with arterial hypertension. O. G. Gantimurova, E. A. Ivanilov, N. P. Kareva. Practical and experimental hirudology: results for the decade (1991-2001) .g.): materials of the 7th scientific and practical. conf. Assoc. hirudologists of Russia and CIS countries / ed. I. P. Baskova. Lyubertsy, 2001. Pp. 8-10.
5. Isakhanyan, G. S. Ways to implement the therapeutic effect of hirudotherapy. G. S. Isakhanyan. Girudo-2003: materials of the VIII Conf. Assoc. hirudologists of Russia and CIS countries. under. ed. I. P. Baskova. Moscow, 2003. Pp. 10-11.
6. Kuznetsov, N. On the influence of the secret of a medicinal leech on blood clotting / N. Kuznetsov. Journal of the Russian Society for the Protection of Public Health. 1895. No. 11. Pp. 861.
7. Gerashchenko, L. All about the leech Hirudotherapy for different types of people. L. Gerashchenko. St. Petersburg: Peter, 2007. P. 256

8. Gerashchenko, L. Medical leech will help you: encyclopedia of hirudotherapy: treatment without drugs. L. Gerashchenko, G. Nikonov. Moscow, AST: Astrel, 2008. P. 334
9. Nikonov G. I. Medical leech and the basics of hirudotherapy. G. I. Nikonov. St. Petersburg: "SDS", 1998. P. 294
10. Zhernov, V. A. Restorative medicine. Hirudotherapy: textbook-method. Allowance. V. A. Zhernov, M. M. Zubarkina. - Moscow: RUDN University, 2004. P. 53