Chronic Venous Insufficiency with Varicose Diseases of the Lower Limb

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ABSTRACT

The massive nature of varicose veins of the saphenous veins of the lower extremities and developing complications among the working population with loss of ability to work and disability determine the social and economic significance of the problem. The authors used lymphotropic therapy in the complex treatment of chronic venous insufficiency in 41 patients with varicose veins of the lower extremities. The effect on the lymphatic system of the lower extremities through LT and LS significantly improves microcirculation, creates favorable conditions for relieving symptoms of varicose veins of the saphenous veins, prevents the development of complications, both during conservative treatment and during surgical interventions, and promotes rapid rehabilitation of patients.

Keywords: Chronic venous insufficiency, varicose veins of the lower extremities, lymphotropic therapy.

The massive nature of varicose veins of the saphenous veins of the lower extremities (VVSVLE) and developing complications among the working population with loss of ability to work and disability determine the social and economic significance of the problem. The lack of radical methods of treatment determines the need to search and implement new effective methods of treating this most common vascular disease (1,5,6,8,11).

Treatment of VVSVLE involves the elimination or weakening of pathological blood flow in the venous system of the saphenous veins of the lower extremities. (SVLL). The relevance of the problem is related to the many unresolved issues relating to the etiopathogenesis, development of venous hypertension, methods of conservative and surgical treatment, prevention of both disease progression and the development of complications (1,7, 13).

Determination of the mechanism of development of venous hypertension. A difficult point is the elimination of congestion in the venous and lymphatic vessels, collaterals of the great and small saphenous vein (GSV and SSV), perforating near-ankle veins, and Coquette's zone. To achieve the effectiveness of surgical intervention, it is necessary to take into account the existing anatomical features of the structure of the venous system of the limb (5,8,9,10), which contributes to planning the scope of surgical intervention individually.

It should be noted that in parallel with the venous system, the lymphatic system of the lower extremity is involved in the pathological process, on which the state of microcirculation, the development of progression, complications of the disease, the state of the local immune system and the body as a whole depend. The impact on the lymphatic system of the legs during the treatment of VVSVLE is currently not given due importance, which in our opinion is incorrect.

Treatment of varicose veins of the saphenous veins currently used, including surgery, does not eliminate varicose veins (VD), but only eliminates varicose veins of the legs (7,9). The main principles of VVSVLE treatment

are: 1) elimination of varicose veins of the saphenous veins symptoms; 2) prevention of disease progression; 3) prevention of the development of complications of the disease; 4) improvement of the cosmetic effect, improving the quality of life of patients.

In achieving these goals, complex conservative treatment with the use of regional lymphotropic therapy as an independent method, and in the process of preparing patients for surgery, in the postoperative period, is of direct importance. It is indispensable when patients have contraindications for surgical treatment of varicose veins or when patients refuse surgical treatment. In the complex treatment of saphenous varicose veins, we perform regional lymphatic therapy through the foot of the affected leg. The use of regional lymphotropic therapy helps stimulate the drainage state of the interstitium, enhances lymph formation and lymph flow, improves microcirculation, prevents the formation of lymphothrombosis, affects microflora and toxins, and increases the immunobiological reactivity of the body (3,4).

Objective of the study: using modern methods and means of diagnosis and treatment, by influencing all components of the etiopathogenesis of the development of complications, progression of varicose veins of the saphenous veins; to increase the effectiveness of treatment of patients with this severe widespread vascular pathology.

Materials and methods of research. We observed 55 patients suffering from VVSVLE, who were divided into 4 groups. The diagnosis was made on the basis of objective subjective data, anamnesis of the development of the disease, clarification of etiopathogenetic data on which the treatment program and rehabilitation measures depend. General clinical examinations, biochemical tests, and a coagulogram are performed. Patients are examined in vertical and horizontal positions.
In terms of diagnostics, attention is paid to complaints, anamnestic data, proper examination of the limbs, identification of symptoms, and tests. We attach importance to the symptoms that determine the functional state of the veins and valve apparatus; Hackenbruch-Sicart, Sheinis, Pratt, Delbe-Perthes, Schwartz, Fegan. Among the special research methods we use capillaroscopy, rheovasography, oscillography, and Doppler ultrasound. The highest incidence is observed in patients of young and middle working age. The duration of the disease is from 5 to 15 years or more.

Lymphotropic therapy (LT), lymphatic stimulation (LS), along with traditional methods of treatment, treated patients, starting from the moment of admission, through the first or second interdigital space, or the anterior outer surface of the inner ankle, strictly subcutaneously, with a needle for intradermal injections, slowly injecting lymphostimulators: solutions of novocaine, furosemide, heparin, immunomodulin according to the developed scheme. We conduct LT sessions once a day and during the prophylaxis process, as well as 3-4 days before surgery and after its completion. We add a broad-spectrum antibiotic, diphenhydramine, to a course of treatment of 8-10 sessions, especially in the presence of chronic thrombophlebitis. The most commonly used antibiotics were ampicillin, clofaran, and oxacillin. Venectomies are performed according to a developed algorithm using mini approaches, miniphlebectomies differentiated depending on the nature of the pathological process and hemodynamic changes. The latter were determined by the patient undergoing dynamic rheovasography, Doppler ultrasound, capillaroscopy, Ap^{198} lymphotropic scanning, Te^{199} lymphography, as well as clinical and biochemical studies.

Obtained results and discussion. Considering the incurability of VVSVLE, the low effectiveness of conservative treatment methods, the still high percentage of relapses, and complications with the most radical surgical treatment, we used radiotherapy in the process of conservative and surgical treatment methods. We applied effects on the lymphatic bed for the first time in VVSVLE. The first group included 11 patients with initial signs of VVSVLE in the form of discomfort, a feeling of heaviness in the legs

after prolonged physical activity, which stopped after rest. Local manifestations are noted in the form of mesh intradermal dilations, telangiectasia, spider veins of tension during palpation along the veins, which are not yet visible. Hemodynamic changes in this group of patients were not detected by rheovasography or ultrasound examinations. The second group consisted of 18 patients who had varicose veins of the saphenous veins, not of a pronounced stem nature, and individual varixes. Patients complained of fatigue, heaviness of the legs, cramps, and pasty sounds. These phenomena stopped after rest. During ultrasound examinations, blood reflux through the great saphenous vein did not reach the ankle; superficial reflux predominated with the development of a high veno-venous discharge or sapheno-popliteal anastomosis. When examining the lymphatic vessels, segmental dilations and the formation of anastomoses between them were noted; the function of the valve apparatus was preserved; there was evidence of an increase in the volume of the lymphatic bed. Rheovasograms show increased vascular tone and congestion in the veins.

41 patients underwent surgical treatment; 30 patients received RLT before surgery and in the postoperative period.

Patients in the third group consisted of 15 patients. Along with fatigue, heaviness in the legs, cramps and swelling appeared in them. The latter did not completely disappear after rest. Locally, a pronounced dilatation of the saphenous veins was observed, covering both the GSV and SVC basins, as well as combined lesions of the veins. Ultrasound examinations revealed total blood reflux through the superficial veins with incompetent sapheno-femoral vascular and perforating reflux with low veno-venous discharge through incompetent communicating veins of the leg and foot. Rheovasograms show pronounced phenomena in the veins with impaired outflow, deformation of the arteries.

Patients of group 4 - 11 people with severe symptoms of hemodynamic decompensation, pronounced varicose veins, mainly combined lesions of the GSV and SSV that did not go away after rest, the phenomenon of dermatitis in the lower third of the leg on the inner surface, small ulcers up to 2-3 mm. in diameter, hyperpigmentation.

Patients in the I and II stages of the disease of VVSVLE received irregularly traditional methods of treatment in 52% of cases, and in 38% did not receive any treatment at all. In 65% of patients, concomitant diseases were identified and received VVSVLE. 65% of patients had concomitant diseases: cardiovascular system, respiratory system, genitals. The cause of the disease in 20% of cases was participation in heavy sports, (young contingent) hereditary factor - 25%, orthostatic - 24%, 25% - pregnancy, hormonal factors, in 6% - the causes could not be identified.

The inclusion of LT and LS in the complex of traditional methods of treatment of VVSVLE in 30 patients revealed a positive effect during the pathological process. From the first courses of treatment, patients experienced relief from fatigue, feeling of heaviness, leg cramps, and pain decreased. This significantly improved the function of the affected limb, the general condition of the patients, and performance. At stages I and II of the process, the effect was achieved in all patients on days 2±0.52. An improvement in hemodynamic parameters was noted on rheovasograms; the retrograde motion along the GSV decreased at the height of the Valsalva maneuver.

At stage III of VIVD, along with the relief of the described symptoms, the tension along the main veins in the thigh and lower leg decreased, and swelling stopped by 3±0.8 days.

In patients with IV VVSVLE, after 3-4 sessions, the symptoms of dermatitis were significantly controlled, skin itching and cramps disappeared, and epithelization of small lesions (with a diameter of 0.2 ± 0.1 ml) occurred. Swelling decreased significantly by the end of the day, and was insignificant after rest. The phenomena of stagnation in the venous system on rheovasograms and Doppler ultrasound significantly decreased.

In the process of complex therapy with the use of RLT, an important point was the transition of impaired hemodynamics of the III stage of the process to II, a significant improvement in the course of the process at IV

stage with the relief of local destruction. The effectiveness of the reverse development of the pathological process in VVSVLE was noted in 85% of cases, and in the control group of patients with the corresponding course of the process with traditional treatment, it was noted in 62% of cases.

Surgical treatment of patients with VVSVLE was based on a proven individual algorithm for conducting mini accesses and phlebectomy in the areas of identified valvular defects of incompetent perforators, removing the most altered, tortuous sections of the veins.

In this group of patients, with correction of hemodynamic parameters by the use of LT and LS before surgery, the postoperative period was much easier, there were no inflammatory phenomena, swelling, and the pain syndrome was insignificant. Patients were active from day 2 and were discharged on days 4-5. In the group of patients who underwent traditional preparation and postoperative management, edema, pasty limbs, and severe pain were noted, which affected the activity of the patients and impaired hemodynamic parameters. We were discharged from the hospital on 7-8 days.

41 patients underwent surgical treatment; 30 patients received radiotherapy before surgery and in the postoperative period.

This improved the course of the surgical intervention, as swelling and inflammation decreased. Conducting RLT in the postoperative period made it possible to significantly reduce pain, the manifestation of inflammatory reactions compared to the group of operated patients without the use of RLT by 40-50%. There were no postoperative complications in the form of edema or thrombophlebitis. In 85% of cases healing was due to primary intention.

The effect on the lymphatic system of the lower extremities through LT and LS significantly improves microcirculation, creates favorable conditions for relieving symptoms of VVSVLE, prevents the development of complications, both during conservative treatment and during surgical interventions, and promotes rapid rehabilitation of patients.

Conclusions:

1. In optimizing the treatment and prevention of complications of VVSVLE, it is necessary to influence all pathogenetically mechanisms of development of a complex process, including lymphatic.
2. In the etiopathogenetic treatment of VVSVLE, the use of LT and LS is justified.
3. A significant effect was achieved by using LT and LS for VVSVLE. For conservative and surgical treatment of patients.
4. During the preparation, conduct of surgical intervention and after it, the use of LT showed good results in 85% of cases
5. Conducting RT significantly improves the course of VVSVLE, ability to work, quality of life of patients, and rehabilitation processes.

Literature:

1. Bogachev V.Yu., Golovanova O.V., Malysheva I.N. The effectiveness of sulodexide in the treatment of chronic venous insufficiency. Results of the ACCORD study. Angiology and vascular surgery. 2017;23(3):83-87
2. Bogachev V.Yu., Rodionov S.V., Jenina O.V. Pharmacotherapy of chronic venous diseases. New European recommendations. Hospital-replacing technologies: Outpatient surgery. 2018;3-4:12-21.
3. Dzhumabaev S.U. "Lymphatic therapy in surgery." – T.-1991
4. Levin Yu.M. "Fundamentals of therapeutic lymphology." M. - 1986, 118-135
5. Maksimov M.L., Ermolaeva A.S., Voznesenskaya A.A., Starodubtsev A.K. Chronic venous diseases: features of pathogenesis and rational approaches to therapy. RMJ. 2018;4:25-29.
6. Russian clinical guidelines for the diagnosis and treatment of chronic venous diseases. Phlebology. 2018;3:146-240.
7. Stoyko Yu.M., Kirienko A.I., Zatevakhin I.I. and others. Russian clinical guidelines for the diagnosis and treatment of chronic venous diseases. 2018;12(3):2–96

8. Stoyko Yu.M., Gudymovich V.G., Tsyplyashchuk A.V. Modern aspects of endothelial protection in the treatment of patients with chronic venous insufficiency in the stage of trophic disorders. Angiology and vascular surgery. 2016;22(4):109-114.
9. Stoyko Yu.M., Kirienko A.I., Ilyukhin E.A. and others. Diagnosis and treatment of thrombophlebitis of the superficial veins of the extremities. ADF recommendations. Phlebology. 2019;13(2):78–97
10. Di Nisio M., Wichers I.M., Middeldorp S. Treatment for superficial thrombophlebitis of the leg. 2018. Available at: https://www.cochrane.org/.
11. Gloviczki P., Dalsing M.C., Eklöf B. et al. Handbook of Venous and Lymphatic Disorders: Guidelines of the American Venous Forum. CRC Press. 2016.
12. Lee A.J., Robertson L.A., Boghossian S.M., Allan P.L., Ruckley C.V., Fowkes F.G., Evans C.J. Progression of varicose veins and chronic venous insufficiency in the general population in the Edinburgh Vein Study. J Vasc Surg Venous Lymphat Disord. 2015;(3):18-26.
13. Litzendorf M.E., Satiani B. Superficial venous thrombosis: disease progression and evolving treatment approaches. Vasc Health Risk Manag. 2011;7:569–575.