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ANALYSIS OF TREATMENT OPTIONS FOR STASIS DERMATITIS

Artem Fedorov ✉, ***Ekaterina Bushueva***, ***Mikhail Cherniaev***, ***Ekaterina Gitelzon***, ***Valentina Foroshcuk***, ***Pavlos Pavlou***, ***Alexander Faybushevich***

Department of Hospital Surgery, Medical Institute, RUDN University, Moscow, Russia

✉ ***1032131527@pfur.ru***

ABSTRACT

Aim: 1) To analyze the effectiveness of various treatment methods for stasis dermatitis. 2) To evaluate the effectiveness of various components of conservative therapy.

Methods: 80 patients (52 women and 28 men) aged 43 to 82 years old with CEAP class C4a varicose veins of the lower extremities, complicated by stasis dermatitis, were enrolled in the study. The patients were divided into two groups of 40 people each, comparable in terms of the main clinical and anamnestic data. The patients of the first group underwent surgical elimination of pathological reflux followed by conservative therapy. In patients of the second group surgical intervention was postponed or contraindicated. Patients of the second group were randomly divided into two subgroups of 20 patients using a random number generator. Patients of the second group received various options of conservative therapy.

Results: In the first group, 34 patients (85%) showed complete remission of stasis dermatitis in the control periods, in 6 patients (15%) the area decreased to 11 mm2. In subgroup 2A, complete remission was observed in 13 patients (65%). In the rest (7) the affected area was 13.8±mm2. In subgroup 2B, complete remission was not observed. The affected area averaged 14.1±mm2.

Conclusion**s**: The best result in the treatment of stasis dermatitis was observed in the group that received surgical treatment followed by conservative therapy. In two subgroups receiving conservative therapy, the subgroup treated with venotonics, showed the best clinical result. The study confirms the need for an integrated approach to the treatment of chronic venous insufficiency complicated by stasis dermatitis.

Keywords: stasis dermatitis, chronic venous diseases, varicose, Diosmin

INTRODUCTION

Varicose veins in lower extremities is a disease characterized by primary varicose transformation, accompanied by valve failure and bleeding disorders. The international classification of CEAP from 6 classes by severity distinguishes the C4 group, which is characterized by a number of skin complications, among which varicose eczema (C4a) occupies a special place. This is a type of microbial eczema caused by chronic venous insufficiency (CVI) manifested by a polymorphic itchy rash. Lesions are localized on

the lower extremities, mainly in the lower third of the lower legs.[1] Varicose eczema is characterized by serous inflammation of the papillary layer of the dermis and focal spongiosis of the epidermis. The factor triggering the disease is venous stagnation with increased hydrostatic pressure, increased capillary permeability and extravasation of blood elements. This provokes edema of perivascular tissues, which leads to microangiopathy, impaired oxygen diffusion. Microangiopathy is accompanied by leukocyte adhesion, activation of neutrophils and macrophages. Penetrating into tissues, cellular elements release pro-inflammatory mediators, initiating inflammation. Violation of the diffusion of nutrients and oxygen forms epidermal dysfunction, which leads to the development of asteotic eczema and the attachment of microbial flora.[2,3]

The limited amount of data makes it difficult to answer the question about the prevalence of stasis dermatitis. According to the data of the international epidemiological study View Consult Program[4], grade c4 in CEAP was found in 7.1% of the total number of respondents studied. According to the prospective observational study SPECTR[5], the diagnosis of stasis dermatitis is established in 2.7-10% of patients with chronic venous insufficiency. A study conducted in western Siberia gives more accurate figures. Thus, according to the data, varicose eczema occurs in 6.9% of phlebological patients.[6] We studied the medical documentation of 1150 patients with varicose veins of the lower extremities (C2-C6 according to the CEAP classification) who were treated at the clinical bases of the Department of Hospital Surgery of the RUDN University in the period from September 2020. By August 2021, 80 (6.95%) out of 1,150 patients had varicose eczema, the results obtained are comparable with the data from the above sources.

The classical symptoms of stasis dermatitis is represented by manifestations of chronic venous insufficiency in combination with polymorphic itchy rash in the lower thirds of the shins. Often, together with stasis eczema, other dermatological symptoms are observed in patients. Among our 18 patients, in addition to polymorphic rash, there were such dermatological phenomena as white skin atrophy (12 people) lipodermatosclerosis (1 person) hemosiderosis (5 people) in the rash area.

The importance of the problem lies in the fact that stasis dermatitis is not a dangerous complication, but significantly reduces the quality of life in patients. Thus, the global quality of life (QOL) index in patients suffering from chronic venous insufficiency in class C4 is 60.0. Further progression of CVI leads to an even greater decrease in QOL, and not infrequently to disability of patients. Vascular etiology and dermatological clinic puts the disease at the junction of the specialties of vascular surgery and dermatology. This suggests the need for a comprehensive approach to the treatment of stasis eczema and makes the question of tactics for the treatment of this pathology relevant.

Treatment of stasis dermatitis involves addressing the primary process (chronic venous disease) and skin manifestations. Currently, the most radical and pathogenetically determined method of treatment is a surgical operation aimed at eliminating blood reflux in the superficial and perforating veins. In addition to surgery, modern algorithms for the treatment of chronic venous insufficiency imply combined conservative therapy. In addition, conservative therapy is used independently in cases where surgical treatment is contraindicated for any reason. Currently, conservative therapy includes venotonic drugs, elastic compression and topical therapy. Among venotonic drugs, diosmin-containing drugs from the group of micronized purified flavonoid fraction have the best evidence. The diosmin included in their composition increases the vasoconstrictive effect of noradrenaline on the venous walls, which leads to an increase in venous tone and, consequently, reduces venous capacity, extensibility and stagnation. This increases venous outflow and reduces venous hyperpressure present in patients suffering from chronic venous insufficiency. In order to partially restore venous outflow and stop the leakage of blood from deep veins to superficial veins, elastic compression is used. Two types of products are mainly used: elastic bandages and compression knitwear (stockings, leggings, tights) divided into compression classes. Elastic compression is a well-studied treatment method that most specialists consider to be a key component of both conservative therapy and postoperative treatment.[6,7] Topical therapy consists in hygienic cleaning of the eczema focus, followed by the reconciliation of antiseptic or antibacterial drugs. In order to prevent the addition of mycotic flora, an antifungal component can be used. Depending on the severity of the eczematous process, topical glucocorticosteroids can be used.

Aim: 1) to compare surgical and conservative methods of treatment of stasis dermatitis. 2) to evaluate the effectiveness of various components of conservative therapy.

METHODS

The study, carried out at the clinical base of the Department of Hospital Surgery of the RUDN University, included 80 patients (52 women and 28 men) aged 43 to 82 years, long-term suffering from varicose veins in lower extremities of class C4a according to CEAP, complicated by stasis dermatitis. The patients

were divided into two groups of 40 people each, comparable according to the main clinical and anamnestic data.

Patients of the first group underwent surgical elimination of pathological reflux (28 patients - combined phlebectomy, 12 patients - endovasal laser treatment (EVLT) with subsequent postoperative conservative therapy in the form of elastic compression, a course of venotonizing and topoic therapies. For elastic compression during combined phlebectomy in the early postoperative period (24 hours after the operation) elastic bandages of medium extensibility were used, then elastic stockings of the 2nd compression class. In all cases of EVLT execution for elastic compression, compression class 2 bags were also used. A venotonizing therapy was provided by prescribing a drug from the group of flavanoids "Vazoket" (active ingredient - diosmin) 600 mg 2 times a day during the entire observation period. Topical therapy of varicose eczema included treatment of the affected surface with an antiseptic solution "miramistin" as well as the appointment of a combined drug of the betamethasone group (Betamethasone + Gentamicin + Clotrimazole) in the form of a cream. The second group included patients whose surgical intervention was postponed or contraindicated for some reason. Patients of the second group were randomly divided into two subgroups of 20 patients using a random number generator. In group 2A, conservative therapy was carried out similarly to patients of the first group. Patients in group 2B received only elastic compression and topical therapy excluding venotonizing therapy. The study did not include patients with previously performed phlebectomy, obliterating diseases of the arteries of the lower extremities, and other dermatological diseases. The severity of CVI was assessed according to the clinical venous disease Severity Assessment Scale (VCSS) at the beginning of treatment after 1 and 4 weeks. The severity of stasis dermatitis was determined by measuring the affected area at the same time. Polymorphic eruptions along the periphery of the eczema focus were considered the boundary of the area of stasis eczema. In addition, the severity of subjective symptoms was assessed.

RESULTS

In the first group, the success of operations was 100%, no complications were observed. All patients were discharged a day after the interventions with the control of conservative therapy on an outpatient basis. On the first visit (after 1 week), the average value on the VCSS scale significantly decreased in the first group (from 19 to 10 points) in the other groups at the time of the first control, the changes were insignificant. After 4 weeks in the first group, the average value of the severity of the disease on the VCSS clinical scale decreased from 19 to 7 points. In group 2A, this indicator decreased from 19 to 9 points. In group 2B from 19 to 13, the area of varicose eczema before treatment in all patients was comparable and averaged 20.3 mm2 in the first group, 19.5 mm2 in the second group ($p>0.05$). After 4 weeks, all patients noted a regression of symptoms in the form of a decrease in itching and discomfort edema. In all groups, there was a clinically significant decrease in the affected area, however, there were differences. Thus, in the first group, at the control time, 34 patients (85%) had complete remission of stasis eczema, in 6 patients (15%) the area decreased to an average of 11 mm2. In subgroup 2A, complete remission was observed in 13 patients (65%), in the rest (7), the affected area averaged 13.8 mm2. In subgroup 2B, the onset of complete remission was not observed. The area of stasis dermatitis averaged 14.1 mm2.

The best result in the treatment of stasis dermatitis was observed in the group that received surgical treatment followed by conservative therapy in the form of elastic compression and the venotonizing therapy with drugs from the flavanoid group and topical therapy. In the group of non-surgical treatment, the best clinical result was shown by a scheme with a change of venotonics.

CONCLUSIONS

Thus, the conducted study firstly shows that the surgical tactics of treatment of CVI complicated by stasis dermatitis is the most effective. At the same time, complex conservative therapy can be an alternative to surgical treatment in cases when for some reason it is impossible to perform surgery. Secondly: we confirm the necessity and importance of an integrated approach to the treatment of chronic venous insufficiency complicated by stasis dermatitis. Third: confirms the effectiveness of the venotonizing phosphorous-containing medication. The drug from the flavonoid group has shown its effectiveness in the complex treatment of stasis dermatitis and is a justified component of conservative therapy of stasis dermatitis and varicose veins in lower extremities.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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