



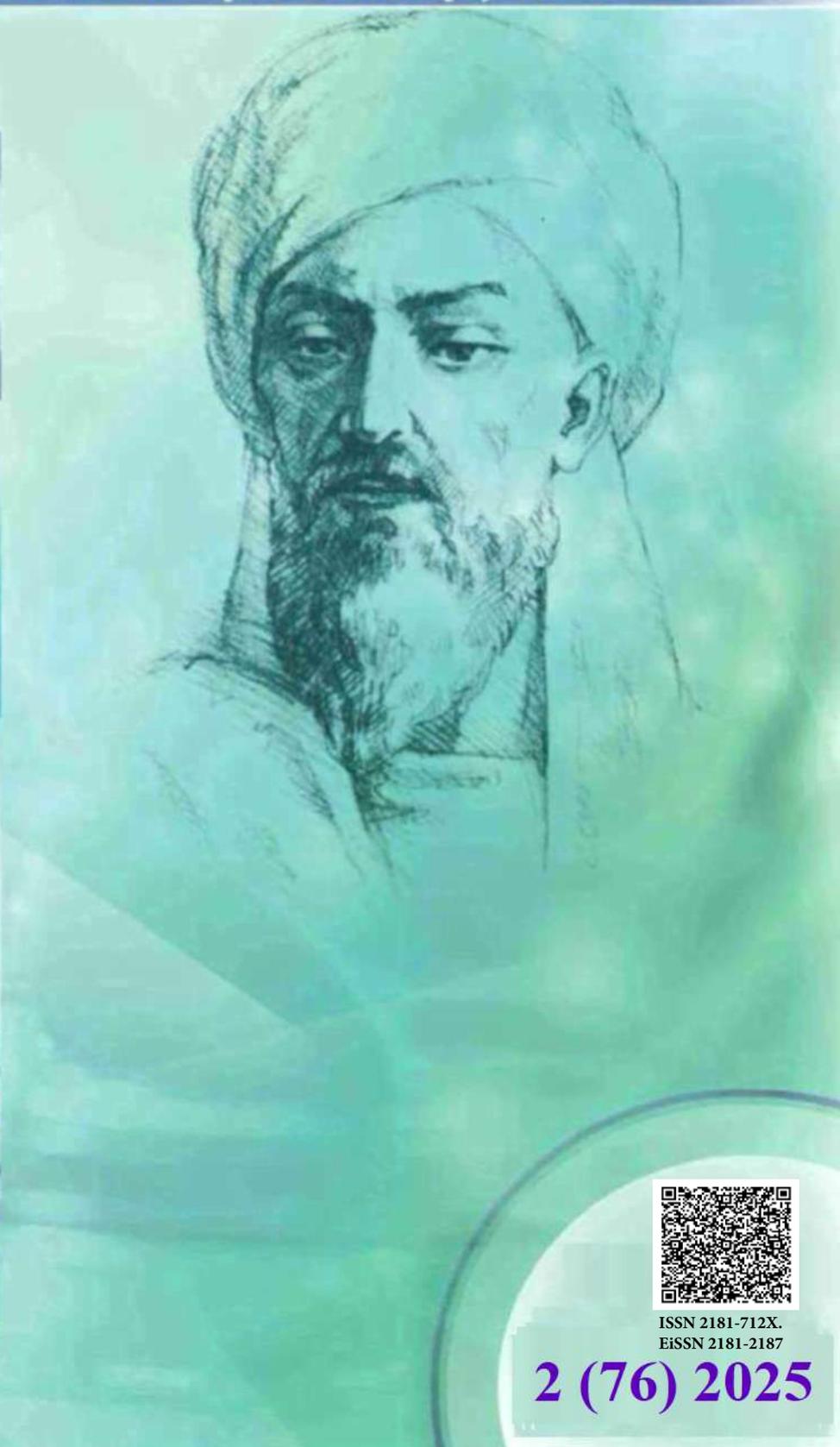
New Day in Medicine
Новый День в Медицине

NDM



TIBBIYOTDA YANGI KUN

Ilmiy referativ, marifiy-ma'naviy jurnal



AVICENNA-MED.UZ



ISSN 2181-712X.
EiSSN 2181-2187

2 (76) 2025

**Сопредседатели редакционной
коллегии:**

**Ш. Ж. ТЕШАЕВ,
А. Ш. РЕВИШВИЛИ**

Ред. коллегия:

М.И. АБДУЛЛАЕВ
А.А. АБДУМАЖИДОВ
Р.Б. АБДУЛЛАЕВ
Л.М. АБДУЛЛАЕВА
А.Ш. АБДУМАЖИДОВ
М.А. АБДУЛЛАЕВА
Х.А. АБДУМАДЖИДОВ
Б.З. АБДУСАМАТОВ
М.М. АКБАРОВ
Х.А. АКИЛОВ
М.М. АЛИЕВ
С.Ж. АМИНОВ
Ш.Э. АМОНОВ
Ш.М. АХМЕДОВ
Ю.М. АХМЕДОВ
С.М. АХМЕДОВА
Т.А. АСКАРОВ
М.А. АРТИКОВА
Ж.Б. БЕКНАЗАРОВ (главный редактор)
Е.А. БЕРДИЕВ
Б.Т. БУЗРУКОВ
Р.К. ДАДАБАЕВА
М.Н. ДАМИНОВА
К.А. ДЕХКОНОВ
Э.С. ДЖУМАБАЕВ
А.А. ДЖАЛИЛОВ
Н.Н. ЗОЛотова
А.Ш. ИНОЯТОВ
С. ИНДАМИНОВ
А.И. ИСКАНДАРОВ
А.С. ИЛЬЯСОВ
Э.Э. КОБИЛОВ
А.М. МАННАНОВ
Д.М. МУСАЕВА
Т.С. МУСАЕВ
М.Р. МИРЗОЕВА
Ф.Г. НАЗИРОВ
Н.А. НУРАЛИЕВА
Ф.С. ОРИПОВ
Б.Т. РАХИМОВ
Х.А. РАСУЛОВ
Ш.И. РУЗИЕВ
С.А. РУЗИБОВЕВ
С.А.ГАФФОРОВ
С.Т. ШАТМАНОВ (Кыргызстан)
Ж.Б. САТТАРОВ
Б.Б. САФОВЕВ (отв. редактор)
И.А. САТИВАЛДИЕВА
Ш.Т. САЛИМОВ
Д.И. ТУКСАНОВА
М.М. ТАДЖИЕВ
А.Ж. ХАМРАЕВ
Д.А. ХАСАНОВА
А.М. ШАМСИЕВ
А.К. ШАДМАНОВ
Н.Ж. ЭРМАТОВ
Б.Б. ЕРГАШЕВ
Н.Ш. ЕРГАШЕВ
И.Р. ЮЛДАШЕВ
Д.Х. ЮЛДАШЕВА
А.С. ЮСУПОВ
Ш.Ш. ЯРИКУЛОВ
М.Ш. ХАКИМОВ
Д.О. ИВАНОВ (Россия)
К.А. ЕГЕЗАРЯН (Россия)
DONG JINCHENG (Китай)
КУЗАКОВ В.Е. (Россия)
Я. МЕЙЕРНИК (Словакия)
В.А. МИТИШ (Россия)
В.И. ПРИМАКОВ (Беларусь)
О.В. ПЕШИКОВ (Россия)
А.А. ПОТАПОВ (Россия)
А.А. ТЕПЛОВ (Россия)
Т.Ш. ШАРМАНОВ (Казахстан)
А.А. ЩЕГОЛОВ (Россия)
С.Н. ГУСЕЙНОВА (Азербайджан)
Prof. Dr. KURBANHAN MUSLUMOV (Azerbaijan)
Prof. Dr. DENIZ UYAK (Germany)

**ТИББИЁТДА ЯНГИ КУН
НОВЫЙ ДЕНЬ В МЕДИЦИНЕ
NEW DAY IN MEDICINE**

*Илмий-рефератив, маънавий-маърифий журнал
Научно-реферативный,
духовно-просветительский журнал*

УЧРЕДИТЕЛИ:

**БУХАРСКИЙ ГОСУДАРСТВЕННЫЙ
МЕДИЦИНСКИЙ ИНСТИТУТ
ООО «ТИББИЁТДА ЯНГИ КУН»**

Национальный медицинский
исследовательский центр хирургии имени
А.В. Вишневского является генеральным
научно-практическим
консультантом редакции

Журнал был включен в список журнальных
изданий, рецензируемых Высшей
Аттестационной Комиссией
Республики Узбекистан
(Протокол № 201/03 от 30.12.2013 г.)

РЕДАКЦИОННЫЙ СОВЕТ:

М.М. АБДУРАХМАНОВ (Бухара)
Г.Ж. ЖАРЫЛКАСЫНОВА (Бухара)
А.Ш. ИНОЯТОВ (Ташкент)
Г.А. ИХТИЁРОВА (Бухара)
Ш.И. КАРИМОВ (Ташкент)
У.К. КАЮМОВ (Тошкент)
Ш.И. НАВРУЗОВА (Бухара)
А.А. НОСИРОВ (Ташкент)
А.Р. ОБЛОКУЛОВ (Бухара)
Б.Т. ОДИЛОВА (Ташкент)
Ш.Т. УРАКОВ (Бухара)

2 (76)

2025

февраль

www.bsmi.uz

https://newdaymedicine.com E:

ndmuz@mail.ru

Тел: +99890 8061882

Received: 20.01.2025, Accepted: 03.02.2025, Published: 10.02.2025

UDK 617.58-002.44-009.85-02

CLINICAL FEATURES AND INTEGRATED APPROACH FOR THE TREATMENT OF VENOUS TROPHIC ULCERS

Abdurakhmanov M.M. <https://orcid.org/0000-0001-8394-5453>

Hamdamov U.R. <https://orcid.org/0009-0009-6511-0060>

Bukhara State Medical Institute named after Abu Ali ibn Sina, Uzbekistan, Bukhara, st. A. Navoi. 1

Tel: +998 (65) 223-00-50 e-mail: info@bsmi.uz

Bukhara branch of the Republican research centre of emergency medical care Uzbekistan, Bukhara, st. B.Naqshbandi, 159 tel: +998 (65) 2252020

✓ *Resume*

Venous trophic ulcers are a complex and serious problem that affects 1–2% of the world's elderly population over 65 years of age, and its incidence is constantly increasing. Venous ulcers make up the majority of all chronic ulcers of the lower extremities. The population at increased risk of developing venous ulcers is the elderly. Venous trophic ulcers have a significant negative impact on the quality of life of patients. The problem of venous ulcers remains relevant in modern medicine. The study established the clinical features of venous ulcers. The causes of venous ulceration are not fully understood, but risk factors leading to this pathology are diseases such as varicose veins of the lower extremities and postthrombotic disease (PTD). The total duration of existence of venous ulcerative defects in patients ranges from 2 months to 10 years. In most patients, the healing time for trophic ulcers is about two to four months; in some patients they do not heal for years. Relapses are possible and observed with conservative treatment. The area of ulcerative defects in patients varies and ranges from 1 cm² to 14 cm² or more. The localization of trophic ulcers is variable, but they are mainly presented on the anterior surface of the leg. The article presents the results of combined methods of treating trophic ulcers of venous etiology.

Key words: venous trophic ulcer, treatment, wound coverings, chronic venous insufficiency, varicose veins, postthrombophlebitic syndrome

КЛИНИЧЕСКИЕ ОСОБЕННОСТИ И КОМПЛЕКСНЫЙ ПОДХОД К ЛЕЧЕНИЮ ВЕНОЗНЫХ ТРОФИЧЕСКИХ ЯЗВ

Абдурахманов М.М. <https://orcid.org/0000-0001-8394-5453>

Хамдамов У.Р. <https://orcid.org/0009-0009-6511-0060>

Бухарский государственный медицинский институт имени Абу Али ибн Сины, Узбекистан, г. Бухара, ул. А. Навои. 1 Тел: +998 (65) 223-00-50 e-mail: info@bsmi.uz

Бухарский филиал Республиканского научного центра экстренной медицинской помощи Узбекистан, Бухарская область, 200100, Бухара, ул. Бахоуддина Накшбанди 159, тел: +998652252020 E-mail: bemergency@rambler.ru

✓ *Резюме*

Венозные трофические язвы – сложная и серьезная проблема, от которой страдают 1–2 % пожилого населения мира старше 65 лет, и частота ее возникновения постоянно растет. Венозные язвы составляют большинство из всех хронических язв нижних конечностей. Группа населения с повышенным риском развития венозных язв – это пожилые люди. Венозные трофические язвы оказывают значительное негативное влияние на качество жизни пациентов. Проблема венозных язв остается актуальной в современной медицине. В исследовании установлены клинические особенности венозных язв. Причины венозного изъязвления до конца не изучены, однако факторами риска, приводящими к данной патологии, являются такие заболевания, как варикозное расширение вен нижних конечностей и посттромботическая болезнь (ПТБ). Общая продолжительность

существования венозных язвенных дефектов у больных составляет от 2 месяцев до 10 лет. У большинства больных сроки заживления трофических язв составляют около двух-четырех месяцев, у некоторых больных они не заживают годами. Возможны и наблюдаются рецидивы при консервативном лечении. Площадь язвенных дефектов у пациентов различна и составляет от 1 см² до 14 см² и более. Локализация трофических язв переменна, но в основном они представлены на передней поверхности голени. В статье представлены результаты комбинированных методов лечения трофических язв венозной этиологии.

Ключевые слова: венозная трофическая язва, лечение, раневые покрытия, хроническая венозная недостаточность, варикозное расширение вен, посттромбофлебитический синдром.

VENOZ TROFIK YARALARINI DAVOLASHNING KLINIK O'ZIGA XOSLIGI VA KOMPLEKS YONDASHUVLARI

Abduraxmanov M.M. <https://orcid.org/0000-0001-8394-5453>

Hamdamov U.R. <https://orcid.org/0009-0009-6511-0060>

Abu Ali ibn Sino nomidagi Buxoro davlat tibbiyot instituti, O'zbekiston, Buxoro sh. A. Navoiy kochasi 1 Tel: +998 (65) 223-00-50 e-mail: info@bsmi.uz

O'zbekiston Respublika shoshilinch tibbiy yordam ilmiy markazi Buxoro filiali, Buxoro viloyati, 200100, Buxoro, ko'ch. Bahouddin Naqshbandiy 159, tel: +998652252020 E-mail: bemergency@rambler.ru

✓ Резюме

Venoz trofik yaralar murakkab va jiddiy muammo bo'lib, dunyoning 65 yoshdan oshgan keksa aholisining 1-2 foiziga ta'sir qiladi va uning tarqalishi doimiy ravishda oshib bormoqda. Vena yaralari pastki ekstremitalarning barcha surunkali yaralarining ko'p qismini tashkil qiladi. Vena yaralari pastki ekstremitalarning barcha surunkali yaralarining ko'p qismini tashkil qiladi. Vena yaralarini rivojlanish xavfi yuqori bo'lgan aholi keksalardir. Venoz trofik yaralar bemorlarning hayot sifatiga sezilarli darajada salbiy ta'sir ko'rsatadi. Venoz yaralar muammosi zamonaviy tibbiyotda dolzarbligicha qolmoqda. Tadqiqot venoz yaralarning klinik xususiyatlarini aniqladi. Vena yaralari ekstremitalarning barcha jarohatlarining ko'p qismini tashkil qiladi. Vena yaralarini yuqori bo'lgan aholi keksalardir. Venoz bemorlarning hayot sifatiga yaralangan darajada ta'sir ko'rsatadi. Venoz yaralar muammosi zamonaviy tibbiyotda mehnat qilmoqda. Tadqiqot venoz yaralarning klinik tekshiruvini aniqlandi.

Kalit so'zlar: vena trofik yarasi, davolash, yara yopqichlari, surunkali venoz yetichmovchiligi, varikoz tomirlari, posttromboflebitik sindrom.

Relevance

Trophic ulcers of venous etiology are defects of the skin and underlying tissues due to impaired venous circulation [1].

Trophic ulcers are one of the most common medical illnesses worldwide, affecting about 1–2% of the world's working-age adult population and about 5% of older people, and also leads to temporary or permanent disability and disability [2]. Trophic venous ulcers have been known for a long time and are often encountered in clinical practice. They account for 80% of all lower extremity ulcers [3].

Hippocrates believed that the cause of the formation of ulcers of the lower extremities was dilated veins. They are characterized by slow healing, pain, unpleasant odor and frequent recurrences. Trophic ulcers belong to the highest clinical class of venous diseases according to the CEAP-C6 classification. The cause of a leg ulcer can usually be determined only by history and physical examination. The main causes of ulcer development are varicose veins with chronic venous insufficiency and the late effects of deep vein thrombosis (post-thrombotic or post-phlebitic syndrome) [4].

Bandages and dressings often have a foul odor, which contributes to the depression and social isolation that sufferers may experience. Chronic venous leg ulcers also represent a significant economic burden and their treatment costs represent a significant portion of the health care budget. This disease affects almost all aspects of daily life: sleep is often disturbed, mobility and ability to work are limited. Correct diagnosis is

important to avoid inappropriate treatment, which can delay wound healing, cause wound deterioration, or harm the patient.

Treatment of patients with trophic ulcers is difficult not only because they often recur, but also because they are difficult to treat. To date, several treatment modalities and protocols have been reported, all of which primarily focus on the outpatient treatment of venous ulcers [5].

There are various treatment options such as elastic compression, topical treatment, pharmacological agents and surgical treatment. Elastic compression and local treatment are the basic principles of treatment of trophic ulcers of venous etiology.

Purpose of the study: The purpose of the study is to study the clinical features and present our own results of combined methods of treating trophic ulcers of venous etiology.

Material and methods

The study involved 130 patients with trophic ulcers of the lower extremities, who had a history of and were treated for varicose veins of the lower extremities and post-thrombotic disease for the period from 2020 to 2023. The criterion for inclusion in this study was the presence of trophic ulcers of venous etiology for more than three months.

Exclusion criteria: damage to peripheral arteries, patients undergoing post-surgical treatment of varicose veins, endovascular laser obliteration, sclerotherapy, trophic ulcers of non-venous etiology.

If the above pathologies were detected in patients, they were excluded from the study. The examination of patients included a questionnaire, clarification of complaints, medical history, causes of development, examination and ultrasound diagnostics (duplex examination) in all 130 (100%) patients. Examination of the ulcer should include location, size, appearance, base of the wound, level of exudation, and assessment of the skin around the defect.

The surrounding area should be inspected for pain, swelling, erythema, temperature, induration, discoloration, maceration, dryness, scarring from previous wounds, gangrenous lesions of the fingers, capillary refill, and varicose veins. It is important to remember that venous and arterial diseases can coexist in the same patient. Venous ulcers are significantly different from arterial ulcers.

Duplex scanning is a non-invasive method of choice for venous pathology, which provides valuable information regarding venous blood flow, thrombotic obstruction, patency and reflux, and the effect of muscle contraction. It was performed in all 130 (100%) patients.

The ratio of men and women was as follows: men - 80 (60%), women - 50 (40%) (Table 1).

Table 1

The ratio of men and women

	Number of patients
Men	80 (60 %)
Women	50 (40 %)
Total quantity	130 (100 %)

The average age of the examined patients was 78 years (Table 2).

Table 2

Distribution of patients by age groups

Age	50–60	61–73	74–84	85–90
Number of patients	4 (4 %)	43 (31 %)	71 (56 %)	12 (9 %)
Total quantity	130 (100 %)			

The main complaints of the patients were: the presence of an ulcer, itching, swelling of varying intensity, an unpleasant odor without and with discharge, as well as pain (Table 3).

Table 3

Main symptoms

Symptoms	Number of patients
Ulcerative defect	130 (100 %)
Edema of varying intensity	130 (100 %)
Itching	91 (70 %)
Pain	78 (60 %)
Unpleasant odor without discharge	33 (25 %)
Discharge with an unpleasant odor	78 (60 %)

Table 4

Etiological factors in the development of venous trophic ulcers

Factor	Varicose veins with chronic venous insufficiency	Postthrombotic disease (PTD)
Number of patients	55 (40 %)	75 (60 %)
Total quantity	130 (100 %)	

Table 5

Area of ulcerative defects

Area	Less than 5 cm ²	from 5 to 14 cm ²	more than 14 cm ²
Number of patients	52 (38 %)	72 (55 %)	6 (7 %)
Total quantity	130 (100 %)		

Table 6

Localization of trophic ulcers in relation to anatomical areas

Localization	Anterior surface of the lower leg	Posterior surface of the lower leg	Ankles	Foot	Multiple ulcers
Number of patients	67 (53 %)	10 (10 %)	6 (8 %)	24 (14%)	25 (15 %)
Total quantity	130 (100 %)				

Table 7

Localization of trophic ulcers in relation to the lower extremities to each other

	Bilateral ulcers of the lower extremities	Ulcers on the left lower extremities	Ulcers on the right lower limbs
Number of patients	59 (45 %)	43 (33 %)	28 (22 %)
Total quantity	130 (100 %)		

According to the patients' medical history, the etiological factors in the development of trophic ulcers were: varicose veins with chronic venous insufficiency - 55 patients, postthrombotic disease (PTD) - 75 patients (Table 4).

To evaluate the effectiveness of treatment, the wound area was measured before treatment, during treatment, and at the end of treatment. Such measurements must be accurate and reliable, and preferably carried out using non-contact methods to avoid cross-contamination.

The area of ulcerative defects in patients was revealed: less than 5 cm² in 52 (38%), from 5 to 14 cm² in 72 (55%), more than 14 cm² in 6 (7%) patients (Table 5).

Based on the data obtained, the following localization of trophic venous ulcers on the lower extremities in relation to the anatomical areas was revealed (Table 6). 45% of patients had bilateral leg ulcers, in 33% the ulcers were located only on the left limb, and in 22% only on the right (Table 7).

All patients received only conservative treatment of trophic venous ulcers. Endovascular laser obliteration, sclerotherapy and other methods of eliminating venous reflux were not used. Treatment methods for trophic ulcers of venous etiology consisted of complex treatment. It included: correct position of the leg, local treatment - treatment of the ulcer and application of a compression bandage or knitwear using wound coverings.

Any venous ulcer will heal faster if the patient rests with the lower limb elevated. The height above the level of the heart reduces swelling, improves venous outflow, microcirculation and reduces the load on the valves.

All patients used leg elevation 3 times a day for 30 minutes. Each patient underwent mandatory treatment of the ulcer in the defect area by removing fibrin and necrotic tissue to ensure the formation of granulation tissue, adequate epithelization and reduce the likelihood of infection. They were washed with a stream of sterile saline heated to 37 °C. The next step was to use wet dressings based on Ca 2+ alginate, obtained from brown seaweed Suprasorb A (Lohmann, Austria), guided by the principle of wound management of trophic ulcers in a moist environment.

Alginate dressings are designed to form a soft gel upon contact with wound exudate. Upon contact with exudate, this dressing forms a gel that promotes rehydration of ulcers with moderate to strong drainage, promoting autolytic cleansing. The calcium ions present in the dressings help control bleeding by promoting blood clotting. Currently, there is no data indicating any differences in wound healing time between alginate dressings and hydrocolloid dressings [6]. In cases where there was not much exudate, a drop of boiled water was added. The next stage of treatment was compression therapy, which is still considered the mainstay of treatment for venous ulcers, and its ability to heal venous ulcers is clearly supported by many studies, such as the Cochrane review, which provided evidence that venous ulcers heal faster with compression than without it use [7]. Elastic bandages (bandage) or compression hosiery (socks, stockings, tights) can be used. After treating the wound, a layer of synthetic wool was applied over the bandage without tension. Then a compression bandage was applied using bandages or compression stockings. When applying the bandage, bandages of “short and medium elongation” were used, since they create low pressure when patients are lying down, and high pressure when patients are standing or walking, which is their advantage. Bandaging was done from the narrowest place, just above the ankle. Depending on how much pressure needed to be created, one, two or three layers of bandaging were used. The first layer is a short-stretch bandage, the second layer is a medium-stretch bandage. The third layer is a short-stretch bandage. The use of compression hosiery, as opposed to bandages, has a number of advantages; it is most preferable for patients, since you do not need to have the skills to apply bandages, which eliminates the need for routine application. To create the necessary pressure, socks of the 3rd degree of compression (30–40 mmHg) were used. To make putting on socks easier and to enhance compression, socks of the 1st degree of compression were put on, and on top of them the 2nd degree of compression, due to the friction force between the socks, together they provided even more pressure than socks of the 3rd degree of compression.

Fifty percent of the patients received a bandage and the other half used compression stockings, in an equal proportion. According to the treatment results, no advantage of the bandage over knitwear was found (Table 8).

Table 8

Compression therapy patient ratio

	Number of patients
Compression bandage	65 (50 %)
Compression jersey	65 (50 %)

The work did not have special funding. There are no obvious or potential conflicts of interest among the authors related to the publication of this article.

Research results and discussion

After gentle debridement of the ulcer, in addition to compression therapy, various types of dressings were applied under a compression bandage or hosiery to promote ulcer healing by creating a moist environment and controlling exudate. Compression is essential for complete recovery because it provides physiological venous return, relieves swelling, reduces pain and promotes the pumping effect of muscles, and increases the rate of healing of venous ulcers compared to treatment without compression [8]. When applying a bandage, the pressure in different anatomical areas of the lower limb may be different. If it is not applied correctly, it will prevent the compression level from being adequate.

Based on this, compression hosiery is most preferable for patients who do not have or do not have enough skills to apply a compression bandage. The recommended class of compression products for the treatment of trophic venous ulcers is the third. After treatment of a group of patients, out of 130 patients

with venous trophic ulcers, 89 (68%) were cured within 4 months, 31 (22%) were cured within 2 years, and in 10 (8%) the ulcers did not heal for more than two years (Table . 9). The average duration of ulcers was 12 months. The average size of trophic ulcers based on the analysis results was 8 cm².

Table 9

Healing time of trophic ulcers

Time	Number of patients
Up to four months	76 (58 %)
From four months to two years	42 (32 %)
More than two years	13 (8 %)

Complete healing of venous ulcers was most often observed in the age group of 61–73 years in 40 (30%) patients. The main factor in the development of trophic ulcers in the majority of patients (85 (60%)) was identified as postthrombotic disease.

Most often, trophic ulcers affect both lower extremities - 59 (45%), in 43 (33%) the left lower extremity was affected. In the majority of 67 (53%) patients, trophic ulcers were localized on the anterior surface of the leg, in 24 (14%) on the foot, and 25 (15%) patients had multiple ulcers.

Conclusion

Venous ulcers are the most common of all leg ulcers, with high morbidity and a negative impact on quality of life. Their treatment remains an urgent medical and social problem. In most cases, chronic venous ulcers of the lower extremities are formed due to postthrombophlebitis syndrome. And in the vast majority of patients they are localized on both lower extremities.

Complex treatment is very important for the successful outcome of treatment; as a result of its use in the vast majority of patients, trophic ulcers heal completely within four months. A prerequisite for the management of trophic ulcers is raising the legs, sanitation of the wound, creating a moist environment under compression, as well as controlling exudate using wet dressings based on Ca²⁺ alginate. The main and basic principles of treatment are to improve blood circulation and improve venous return, for this purpose compression therapy is used, which reduces venous hypertension, while increasing the rate of healing of venous ulcers in most patients. This treatment is effective and is the basis of therapy for this pathology.

Thus, trophic ulcers, although not a common cause of mortality, are the cause of significant morbidity and disability, and timely diagnosis and treatment can prevent the development of severe complications.

LIST OF REFERENCES:

1. Sarkar P.K., Ballantyne S. Management of leg ulcers. //Postgraduate Medical Journal. 2000;76:674-682.
2. González-Consuegra R.V., Verdú J. Quality of life in people with venous leg ulcers: an integrative review. //Journal of Advanced Nursing. 2011;67(5):926-944.
3. Musil D., Kaletova M., Herman J. Age, body mass index and severity of primary chronic venous disease. //Biomed Pap Med Fac Univ Palacky Olomouc Czech Repub. 2012;155(367):71.
4. Grosse S.D., Nelson R.E., Nyarko K.A. et al. The economic burden of incident venous thromboembolism in the United States: A review of estimated attributable healthcare costs. //Thromb Res. 2016;137:3.
5. Labropoulos N., Wang E.D., Lanier S.T., Khan S.U. Factors associated with poor healing and recurrence of venous ulceration. //Plast Reconstr Surg. 2012;129(179):86.
6. Sasanka C.S. Venous ulcers of the lower limb: where do we stand? //Indian Journal of Plastic Surgery. 2012;45(2):266-274.
7. Mosti G., Iabichella M.L., Partsch H. Compression therapy in mixed ulcers increases venous output and arterial perfusion. //J. Vasc. Surg. 2012;55(122):8.
8. Wong I.K., Andriessen A., Lee D.T. et al. Randomized controlled trial comparing treatment outcome of two compression bandaging systems and standard care without compression in patients with venous leg ulcers. //J. Vasc. Surg. 2012;55(1376):85.

Entered 20.01.2025