Changes in patient's quality of life comparing conservative and surgical treatment of venous leg ulcers

Vytautas Jankūnas, Rytis Rimdeika, Marius Jasėnas, Donatas Samsanavičius
Division of Plastic Surgery and Burns, Kaunas University of Medicine Hospital, Lithuania

Key words: *life quality, leg ulcer, conservative treatment, skin grafting.*

Summary. *Leg ulcers of different etiology disable up to 1% of total population, and up to 15% individuals over 70 years old. It is an old disease, which troubles the patients and medical personnel and is hard to cure. It might take several years to cure the ulcer fully. Most of the patients with leg ulcers are being treated at home, not in the outpatient departments or hospitals; therefore there is not much information on how the ulcer affects the patient's everyday life and its quality. The researchers often analyze only the financial part of this disorder forgetting its human part: pain, social isolation, and decreased mobility. There are many questionnaires and methods to analyze the quality of life of the patients with leg ulceration. It is often unclear if we should treat the ulcer conservatively for a long time or if part of resources should be used for operation (skin grafting) and the time of treatment should be shortened.*

To see the advantage of both methods and the influence of the ulcer treatment to the quality of life we decided to estimate the functionality of surgical and conservative treatment. We have analyzed the case histories and the data of special questionnaires of 44 patients, which were treated in Department of Plastic Surgery and Burns of Kaunas University of Medicine Hospital in the period of 2001 January – 2004 February and had large trophic leg ulcers (m=254 cm²) for 6 months or more. Ten patients were treated conservatively and 34 patients were treated by skin grafting. All of them were interviewed after 3–6 months. We found that the pain in the place of the ulcers has decreased for the patients, who were treated surgically. By making the differences of the pain more exact we found out, that the patients have been feeling pain before the operation and when interviewing them the second time they told that they felt discomfort, not pain. The intensity of pain remained the same for the patients treated conservatively. The regression of pain also proves the decreased usage of painkillers in the group of the patients with the surgical treatment. All the patients (n=44) have had sleep disorders because of the ulcers. In the group of surgically treated patients, ulcers did not disturb the sleep after more than 3 months, and in the group, treated conservatively, the problem remained. We also found that after surgical treatment the patients were more optimistic and cried less. That shows the recovery of their emotional status. We have also found that the patients knew from the surgeon first than from the family doctor or other medical personnel about this disorder.

We have made conclusions, that with the reduction of the ulcer area the pain is also reduced. Surgical treatment of ulcers (autodermoplasty) reveals a statistically reliable positive effect on patient life quality (sleep and emotions), but even 50% of patients are unaware of the real leg ulceration causes.

Introduction

Chronic leg ulcers are those ulcers, which appear under the knee and cannot be healed in 6 weeks or longer (1). Leg ulcers of different origin disable about 1% of our planet population; 15% of them are older than 70 years (2, 3). Other scientific sources suggest that up to 5% of the population, who are older than 65 have got open-calf ulcers (4). One of the most common causes of the leg ulcers is a varicose vein of the legs, as well as prothrombosis, which affects about 2.5% citizens older than 18 years. Seventeen percent of the people ill with the above-mentioned disease have got leg ulcers. V. Triponis et al indicate that about 8000 people in Lithuania have got venous trophic ulcers, while in the group of 60–80 year olds the incidence of ulcers is already 5% (5, 6). Women get

Correspondence to V. Jankūnas, Division of Plastic Surgery and Burns, Kaunas University of Medicine Hospital, Eivenių 2, 50010 Kaunas, Lithuania. E-mail: vjankunas@hotmail.com

ill with the disease twice more often than men (7). It also does not respond to the treatment easily. The full healing of the ulcer may take a year or more and it becomes a big problem for the patient as well as for the one who takes care (8). There are 2.5 million patients with leg ulcers in the USA; the incidence of this pathology increases among the elderly population of patients. Most of them mention pain as the prevailing symptom (9, 10). Quite often the watering and the unpleasant smell are also mentioned together with the prevailing symptoms that to large extent debilitate the life quality of the ill. Even 25% of the patients complain of the reappearing ulcer within a year of the earlier healed one (11). This causes not only pain and physical discomfort but also a psychological stress.

Most of the patients with leg ulcers are under the supervision of nurses at home and not at the primary health care institutions. Because of that there is not enough information about how these ulcers affect the every-day life of the patient or debilitate his or her life quality. Most of the investigators concentrated upon the financial aspect of the disease without paying attention to possible personal problems such as pain, social isolation, and limited mobility (10). Many patients become dependant upon the nursing personnel, less physically active and socially isolated, and sometimes even get used to their disease and do not hope to become fully treated (6, 12).

There are quite many techniques and questionnaires created in order to investigate the life quality of the patients with leg ulcers. C. Lindholme et al, for instance, employed the questionnaire, which assessed the influence of the leg ulcers upon the 6 aspects of the every-day life: pain, physical mobility, vitality, sleep, social isolation, and emotional reactions. T. Phillips et al investigated the influence of the leg ulcers only upon the financial, social, and psychological aspects of life. E. Elliott et al (1996) indicated that during the assessment of the life quality of the patients it is very important to prescribe the same treatment for all the patients, despite of the place they are treated at: in-patient or outpatient departments. M. Brod assessed the quality of life according to the influence of leg ulcers upon the physical, psychological, and social aspects, however, detaching the influence of the very cause of ulcers, e. g. diabetes, upon the above-mentioned aspects. During this investigation the data was obtained that even the half of the patients retired earlier than required, were fired, or quit their jobs earlier than needed because of the ulcers. Those who continued working demonstrated a reduced efficiency. Also in the scale of emotional spectrum the following feeling were noticed: the feeling of guilt when thinking about the caused discomfort for the surrounding people, anger as well as frustration because of the diminished mobility, and constant anxiety when thinking about the vague future (13). M. Nolan and U. Lundh (1999) together with F. Wilson (2000) made an assumption that the outpatient department nurses, who take care of such patients, might serve as a key-way into patient understanding about the disease and the associated aspects. This would encourage the patient to cooperate during the treatment of leg ulcers.

The above-mentioned investigation reproved that pain is the prevailing complaint. This pain becomes intense at night, limits the mobility and leisure time possibilities, makes the patients angry, deteriorates their sleep as well as makes them socially isolated. Because of the ulcers some even become unable to function independently without any support or help (13, 14). However, the sources contain some information about the patients who consciously interfere with the healing of the ulcer as they wish to maintain social links with the medical personnel who comes to treat them at home. In addition, about 20% of the patients do not know the cause of their ulcers, and 50% of them are indifferent to any available literature about this disease (10).

In spite of the wide availability and application of modern dressing material, therapies with the help of pressure bandages and stockings, modern medication for better arterial blood flow and venous blood outflow, the treatment of leg ulcers remains a long and expensive process, especially when a cause of the ulceration cannot be eliminated (14, 15).

Leg ulcer treatment is the most expensive from all lesions that are treated by the surgeon. According to the methodology that was approved by the International Lesion Treatment Committee the ulcer treatment price should consist of the price of all dressing material that was applied, general nursing time, expenses for medication and other means that were used to treat skin complications, expenses for traveling to get to the doctor and work time that was wasted, as well as additional nursing and time. Although ulcers, as a rule, are colonized by *P. aeruginosa* or *S. aureus*, still, while there are no signs of active infection, the therapy of antibiotics is not recommended, as the redressing with silver sulphurdiazines ointment or other antiseptic is enough (16). Researchers in Lithuania (V. Triponis, I. Gudgalytė) observed that in our country patients spend from 500 up to 2000 litas of personal money for the treatment of ulcers per year (17). United Kingdom spends from 294 up to 650 millions of

pounds in a year for the treatment of ulcers. The biggest part of it is allocated for payment of the nurses who look after the patients at their homes. Those nurses employ a great variety of techniques and ways of treatment and therefore it becomes very difficult to obtain the adequate and reliable information about the influence of one or other drug upon the healing of ulcers as well as upon the changes of the quality of life (3, 8, 10).

Discussions upon the question whether it is expedient to treat the ulcer conservatively way for a long time or to operate on it employing the technique of skin grafting, when a part of the expenses is spent on the operation and the time for treatment is considerably shortened. It is still not clear if the ulcer that is covered by an autodermotransplant would reappear with the same intensity and frequency as the ones that were treated conservatively. W. Schmeller and Y. Gaber found that 29 months after transplantation 58–76% (p=0.08) of patients who had venous ulcers experienced total recovery or the improvement of healing (18). The change in the patient's life quality after the operation is not yet established if compared with the conservative way of treatment. Common opinion on more effective way of treatment has not been reached yet (19, 20). It is also not clear why the ulcers reappear and why there are so many patients in Lithuania with very big leg ulcers (>50 cm²) (Fig. 1).

In order to ascertain the advantages of either treatment technique as well as to determine the influence of ulcers and their treatment upon the quality of life of patients, a decision was taken to assess the efficacy of treatment of ulcers surgically and conservatively. During our trial we assessed the patients with very large leg ulcers (larger than 50 cm² or 0.5% of body surface) or the ones, which could not be healed for 6 months and longer. The case histories as well as the special data obtained from the questionnaires were also assessed.

Material and methods

The aim of our study was to assess the effect of autodermoplasty as well as of the conservative way of treatment upon the speed of healing (epithelization) of large venous leg ulcers and upon the patient's quality of life. We carried out a prospective investigation of the course of the disease of 44 patients (23 females and 21 males) who were treated at the Department of Plastic Surgery and Burns of Kaunas University of Medicine Hospital from January 2001 up to February 2004. During the study, which was approved by the Committee of Ethics of Kaunas University of Medi-

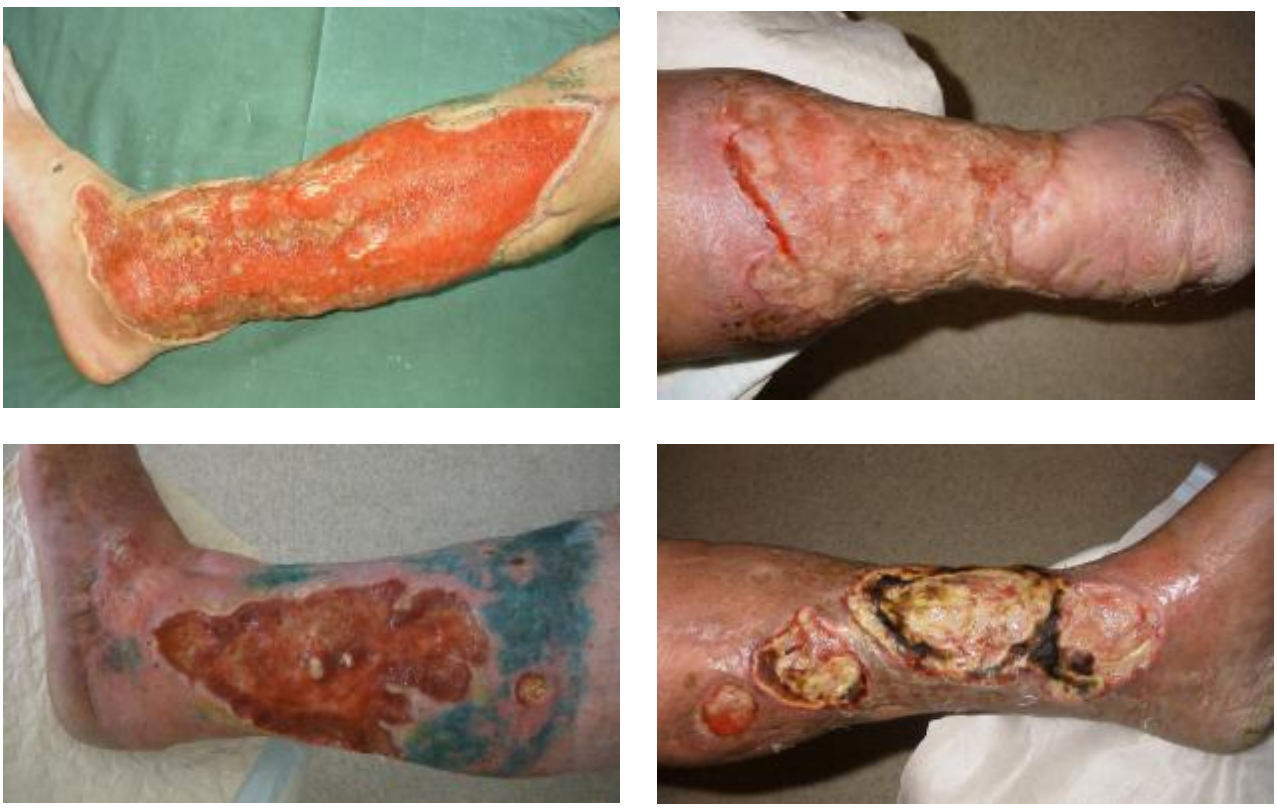

Fig. 1. **Large (>50 cm²) leg ulcers**

cine, we investigated only such case histories where there were some data about the venous ulcers, which could not be healed for 6 months and longer and covered the area that was larger than 50 cm². The investigation involved only the patients with leg vein diseases being the main cause of ulceration (insufficiency of deep leg veins and/or perforative valves, post-thrombosis syndrome, and varices of superficial veins). The patients were randomly selected for the conservative or surgical treatment, i. e. after the explanation of the methods of conservative and surgical treatment, as well as after consent of the patient to participate in the investigation, the nurse drew an envelope, according to which the patient was allocated to one or the other group. There were two patients' groups – 34 were operated and 10 were treated conservatively. These two groups were tested with Mann-Whitney non-parametric test. Before the hospitalization all the above mentioned patients were examined by a plastic surgeon and a vascular surgeon at an out-patient department of Kaunas University of Medicine Hospital where they had the cause of the origin of their ulcers detected and the smear for establishing the pollution of the ulcer taken. The origin of the ulcer was confirmed with the help of anamnesis (previous operations on veins and arteries, thrombophlebitis, deep leg vein thrombosis, trauma, etc.), with the help of clinical data (varicose of the subcutaneous leg veins, skin hyper pigmentation, pale stains, atrophy or indurations) as well as by instrumental examination (Duplex scanning in order to detect the permeability of vein valves, the lumen enlargement, etc). During the examination the patients were asked to fill in a questionnaire of life quality assessment developed by M. E. Hyland (3). The author's agreement for the use of the questionnaire and its translation into Lithuanian were obtained. The general data about the patient and the healing of ulcer were put down in the first part. The intensity of pain, sleep disorders, amount of time for taking care of the ulcer and thinking about it were analyzed in the second part. The third part contained 29 questions or statements (six of them are positive) with four possible answers to each: never, sometimes, often, and always. The evaluation was the following: 0 for good quality of life; 3 for bad quality of life. According to these 29 statements and questions, the function limitations, dysphoric mood, and the healing of ulcer are evaluated. The possible total of the scores might range from 0 (good quality of life) up to 87 (bad quality of life). The main complaint, pain, was assessed by several different ways. This was a pain scale from 1 (no pain) up to 10 (extremely painful) and several additional questions that would assess separate aspects of pain. In addition, according to the widely available literary sources, there were some more questions added. In our opinion, these additional questions gave a broader understanding and evaluation of the influence of ulcers upon the social aspect of patient's life and the doctor-patient relationship. During this study we randomly selected two groups of patients: one group was treated conservatively; the other one was operated on. The preparation for the operations was carried out with the help of hydrocolloid (*Granuflex*) dressings on the ulcers, pentoxifylline of 400 mg 2 times a day for the improvement of arterial blood flow, and the medication of the group of flavonoids (*Venoruton Forte* or others) for the improvement of venous blood outflow and drainage of lymph. Skin biopsy for all these patients was taken in order to identify a possible malignancy, which, in its turn, would absolutely change the way of treatment. If the carcinoma of flat cells (n=2) or some other malignant oncology condition was detected, these patients were immediately eliminated from the trial. The ulcers were operated on only when there were no necrotic masses or any other infectious signs detected, when the patients were in good condition and concomitant diseases were compensated. In spite of the microbiological lesion smear findings, all the patients were administered penicillin intravenously at the time of operation for the prophylaxis of *Streptococcus pyogenes* infection. The technique of patient operation was skin grafting, when the graft was a 0.2–0.3 mm thickness perforated skin part patch. After the operation patients were repeatedly dressed in 72 hours, and later in 48 hours, at the same time employing the absorbent cotton dressings and paraffin nets for the protection of the graft. The donor place (the frontal surface of one of both thighs, as a rule) was dressed with gauze bandages. In addition to that the anti-reflux pressure therapy with pressure class No. 2 stockings *Maxis* (240 den) was employed after the operation, and the medications for better microcirculation, venous outflow and lymph drainage were continued. The stockings were recommended, and it was also recommended to change them every 3 months. The operation results were evaluated. The attending surgeon evaluated them at the time of first dressing change, after the operation, and at the time of patient discharge. At the time of patient discharge, if an area of ulcer that was larger than 5 cm² was left non-epithelized, this part of skin graft was held to be non-naturalized; however, in comparison with the previous ulcer area this would be non-significant. All the patients at discharge were recommended to continue the use of pentoxifylline, flavonoids (*Venoruton Forte* or others) as well as the

anti-reflux therapy of pressure stockings. Distant results were evaluated 3–6 months after the operation. At the time of repeated examinations the area of the rest of the ulcer was measured (if the ulcer have not been fully epithelized). The patients also filled in a corresponding questionnaire in order to assess the life quality, pain, and personal expenses. The control group was tested analogically, where instead of the operation the applied treatment with hydrocolloid (*Granuflex*) dressings was conservative. In order not to misinterpret the findings of the compared patient groups, the other part of the applied treatment and investigation was not made different from the one that was employed with the operated patients. The analysis of the outcome findings was performed using to SPSS 10.0 program.

Results

During the study thirty-three patients were operated on and 10 (n=44) were treated conservatively. It was because of the large (m=254 cm²) venous leg ulcers that cannot be healed for a very long time (>6 months). The same patients were interrogated repeatedly after 3 or 6 months. Most of them were treated at the in-patient department repeatedly (from once to 13 times; M=2). Twenty-three patients who were operated on during their stay at the in-patient department reported on the completely epithelized ulcer, which meant that the whole skin graft was naturalized. The ulcers did not heal and did not become fully epithelized for those who were treated conservatively. These patients were repeatedly interrogated after 5.5 months on average (M=4).

The average of the patients' age was 65.5 (M=66), and they had ulcers for about 92 months. Out of them 23 were females, and 21 were males. Monthly income of many of them was not more than 500 litas; however the expenses for the care of their skin constituted 100–150 litas a month (1200–1800 litas per year) from their personal money. If we compare the conservative way of treatment with the operation, we can say that the expenses for these patients who were operated on diminished after >3 months on average from 140 up to 115 litas, while the expenses for those who were treated conservatively rose from 105 up to 150 litas per month.

We also found that for operated patients, the pain in a place of ulcer diminished statistically significantly ($p<0.05$) (according to the pain scale from 6.0 to 3.2) (Fig. 2). When the differences of the intensity of pain were revised in the groups, it became clear that at the beginning all the recipients usually wrote that there is just pain in the ulcer. During the repeated interrogation the ones who were operated on wrote that at that time they felt more discomfort than pain, while those in the conservative treatment group still reported that there was pain in the place of the ulcer. The reduction of pain in the operated group can also be confirmed by the diminished frequency of the use of analgetics, the fact that was revealed during the repeated interrogation ($p<0.05$). It was also found a statistically significant relationship between the size of the ulcer and the intensity of pain: the bigger was the ulcer, the more intense was the pain ($p<0.05$). However, when comparing the size of the ulcer and the time that the patients allocated for the care of ulcer, we found that there was no connection between the time for the care of ulcer and the size of ulcer. When the microflora of the ulcers was investigated, 15 *S. aureus*, 9 *P. aeruginosa*, 3 *Str. piogenes*, and 3 *Str. haemolyticus* were found. Six smears had no pathogens, and 8 patients were not examined due to other reasons. In either case there was no suppuration in the operated ulcer.

All study patients spent about 0.5 hour per day for the care of ulcers, but after 3 months and later after the operation they spent less than 15 minutes ($p<0.05$). Those, who were treated conservatively, spent the same amount of time (m=0.5 hour) (Fig. 3).

The ulcers disturbed sleep for all patients (n=44). When two different ways of treatment were compared after more than 3 months, it was possible to see that for operated patients ulcers did not disturb their sleep any more ($p<0.05$), while the other group had problems in falling asleep. Comparing the time, which was spent for thinking about the ulcers, it was possible to see that before the standardized treatment initiation it took the patients about 4 hours to think about the ulcers, while after >3 months it was less than 2 hours a day for the operated ones ($p<0.05$), and about 3 hours a day for those who were treated conservatively (Fig. 4).

When the third part of the life quality questionnaire developed by M. E. Hyland was assessed, and when the two groups at the first and the repeated interrogation time were compared, it was possible to see that the points of the operated patients changed from 65 to 55, while for those who were treated conservatively it was from 67 to 56. This does not constitute a significant difference, however, when separate question points were discussed, it was noticed that the operated patients showed statistically significant increase in optimism, they received more information about the ways to treat ulcers, and less patients experienced a wish to cry because of the disturbing pathology ($p<0.05$). This shows the improvement of their emotional status.

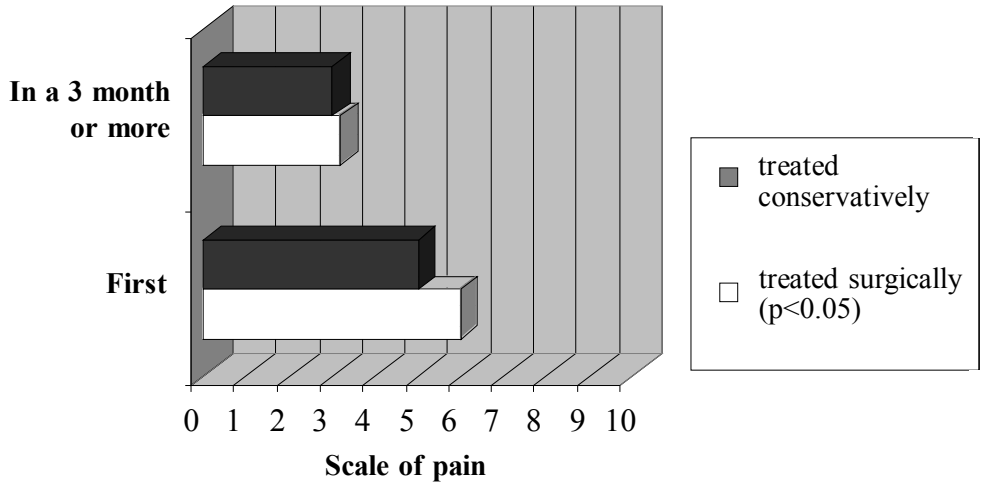

Fig. 2. **Estimation of patient's pain**

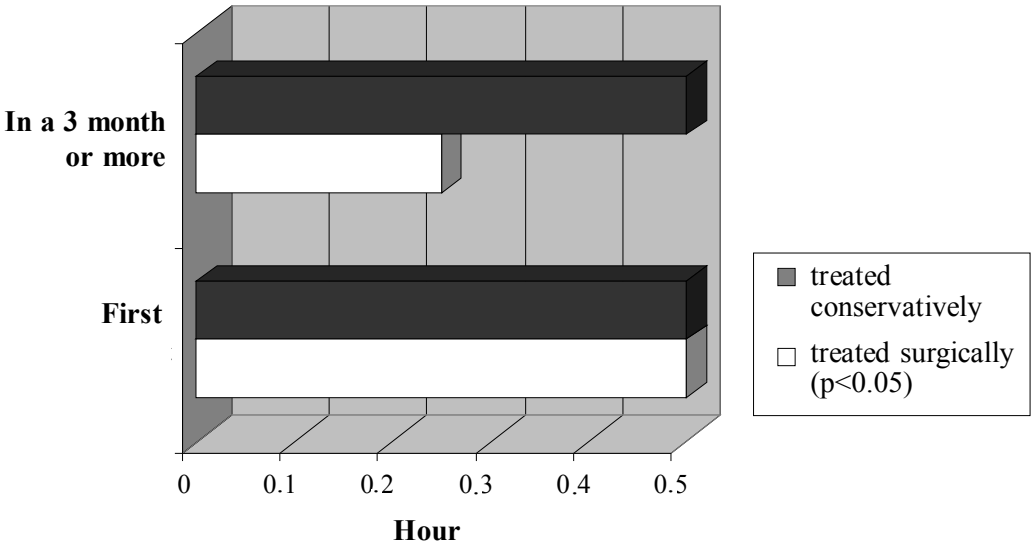

Fig. 3. **Time taken for ulcers care**

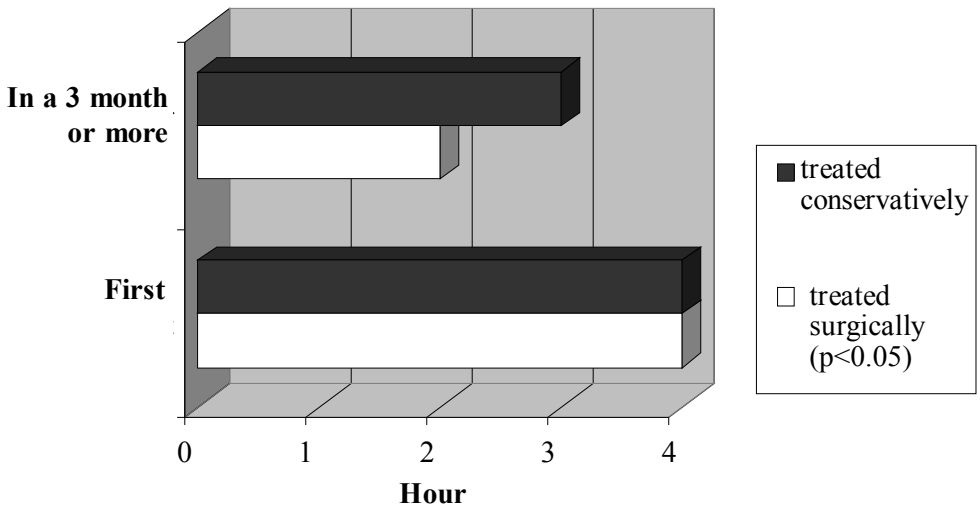

Fig. 4. **Time patients spend on thinking about ulcers**

During the trial it was also confirmed that 82% of the patients received the information from the surgeon, but not from the family doctor or the other medical personnel. This might serve as an explanation why there is such a big difference in the opinion of the cause that was diagnosed and the one that the patient thought about.

Discussion

The age of our study patients (65 years of age) was similar to that found in the literature (2, 3, 5, 6). They were treated because of the large (>50 cm²) venous leg ulcers (that would not heal in 6 months and longer). The expenses of these patients (up to 2000 litas per year corresponded) to the data of other trials in Lithuania (17), and the ulcers in the in-patient department were usually treated for a repeated time (M=2). The findings once again confirm the statement that the treatment of ulcers is a long and very expensive process (14, 15).

Participants of our study were 23 females and 21 males. In international publications we found, that females have leg ulcers twice more frequently than males and some of the authors notice that the causes of the female leg ulceration are vein constrictions because of previous pregnancies (21). We suppose that the reason for similar gender composition in our trial was a small number of patients and strict selection criteria. Most of the patients spoke about pain as of the main tiring symptom. It limited the patient's mobility, caused social isolation, as well as negative emotions. The intensity of pain statistically significantly depended upon the width of ulcer. Such findings confirm many authors' opinion that pain in ulcers is the prevailing complaint, which mostly affects the life quality (3, 9, 10, 13).

According to the third part of the life quality questionnaire that was compiled by M. E. Hyland, other authors' findings about the bad quality of life of the patients with leg ulcers (~65 points) was confirmed (3, 13). Function limitations, dysphoric mood, and ulcer treatment were assessed before prescription of treatment in both groups. When the findings were compared after >3 months, there was no great difference obtained; however, during the investigation of separate points it was noticed that operated on patients showed a statistically significant mood improvement and an increase in optimism towards the healing. We consider that statistically significant differences should increase with the increase of the number of patients treated conservatively.

Before the operation all ulcers were dressed with hydrocolloid (*Granuflex*) dressings, and after the operation there were no suppuration of the ulcer that was covered by a skin graft; however, as in the sources of literature, the ulcers were usually colonized by *S. aureus* and *P. aeruginosa*. This confirms the opinion that the prescription of antibiotics according to the results of the smear is not expedient if the generalized signs of the infection are not detected (16).

Comparing the real cause of the ulcers with the opinion that the patients had or thought about the causes of it (Table), we would find that many patients were wrong (n=24). The results confirm the findings of other investigators that even 50% of the patients are absolutely not interested in their disease (10). The other cause might suggest that according to our data 82% of the cases show that the patients in Lithuania were informed about their disease by the surgeon; however, the surgeon was not the first doctor who had been addresses by the patient troubled by the leg ulcers. The above-mentioned facts confirm opinion of Nolan and Lundh (1999) as well as of Wilson (2000) that the cooperation between the patient and the doctor as well as the other medical personnel is a very important aspect of the successful treatment of the leg ulcers.

Table. **Comparison between the real cause of ulcer and patient's opinion**

Causes of ulcer	Patient's opinion	Real cause
Vein disease	20	44
Artery disease	2	–
Diabetes mellitus	5	–
Trauma	8	–
Cardiac disease	3	–
Other	6	–
In total	44	44

Severe weaknesses of this study can be discussed. Due to the small groups some differences are not statistically significant. But we are continuing this study and will try to publish new results with bigger study groups.

Conclusions

With the reduction of the ulcer area the pain is also reduced. However, the time, allocated to the healing of the ulcer, does not depend on the ulcer size.

Surgical treatment of ulcers (autodermoplasty) reveals a statistically significant positive effect on patient life quality (sleep and emotions).

Even 50% of patients are unaware of the real causes of the leg ulceration.

Pacientų gyvenimo kokybės pokyčiai lyginant konservatyvų ir chirurginį kojų veninių opų gydymą

Vytautas Jankūnas, Rytis Rimdeika, Marius Jasėnas, Donatas Samsanavičius
Kauno medicinos universiteto klinikų Chirurgijos klinikos Plastinės chirurgijos ir nudegimų skyrius

Raktažodžiai: gyvenimo kokybė, kojų opos, konservatyvus gydymas, odos persodinimas.

Santrauka. Lėtinės kojų opos – tai opos, esančios žemiau kelių bei neužgyjančios šešias savaites ir ilgiau. Įvairios kilmės kojų opos sukelia negalią iki 1 proc. planetos gyventojų ir net 15 proc. – vyresniems nei 70 metų. Tai seniai žinoma ir aprašyta patologija, kuri labai vargina sergančiuosius ir juos slaugančius asmenis. Didžioji dalis pacientų, kuriems randasi trofinių opų kojose, gydomi tiesiog namuose, o ne pirminės sveikatos priežiūros centre ar stacionare, todėl nedaug žinoma, kaip opos veikia kasdieninį gyvenimą ir kokios įtakos turi paciento gyvenimo kokybei. Dažniausiai tyrėjų ši liga buvo nagrinėjama tik finansiniu aspektu pamirštant žmogiškąjį, t. y. skausmą, socialinę izoliaciją, mobilumo apribojimą. Sukurta daug metodikų ir klausimynų tirti pacientų, kuriems diagnozuotos trofinės kojų opos, gyvenimo kokybę. Dažnai diskutuojama, ar tikslinga opą ilgai gydyti konservatyviomis priemonėmis, ar operuoti atliekant autodermoplastiką, išleidžiant dalį lėšų operacijai, tačiau labai sutrumpinant gydymo laiką bei pagerinant ligonio gyvenimo kokybę.

Norėdami įsitikinti gydymo metodų įtaka paciento gyvenimo kokybei, įvertinome ilgai negyjančių didelių veninės kilmės opų chirurginio ir konservatyvaus gydymų veiksmingumą. Išnagrinėjome nuo 2001 m. sausio iki 2004 vasario mėn. Kauno medicinos universiteto klinikų Chirurgijos klinikos Plastinės chirurgijos ir nudegimų skyriuje ligonių, kuriems diagnozuotos didelės kojų veninės opos (m=254 cm²), negyjančios šešis mėnesius ir ilgiau, ligos istorijų ir užpildytų specialių anketų duomenis: 10 ligonių gydyti konservatyviai, 34 – autodermoplastika. Visi jie apklausti pakartotinai po 3–6 mėn. Nustatėme, kad operuotiems statistiškai reikšmingai ($p<0,05$) sumažėjo skausmas opų vietoje (vertinant pagal skausmo skalę). Skausmo regresiją operuotų ligonių grupėje patvirtina ir analgetikų vartojimo dažnio sumažėjimas, antrosios apklausos metu ($p<0,05$). Visiems tirtiems pacientams (n=44) opos trukdė miegoti. Lyginant abu gydymo metodus pakartotinai daugiau kaip po 3 mėn., operuotiems opos netrukdė miegoti ($p<0,05$), o konservatyvaus gydymo pacientų grupėje tebetrukdė užmigti. Taip pat nustatėme, kad operuotiems ligoniams statistiškai reikšmingai padidėjo optimizmas, jog opas galima užgydyti, ir patys ligoniai sakėsi žiną, kokiu būdu: mažiau ligonių nerimavo dėl šios patologijos ($p<0,05$), o tai rodo jų emocinės būklės gerėjimą.

Padarėme išvadą, kad, mažėjant opos plotui, mažėja ir skausmo intensyvumas, bet laikas, skirtas opos priežiūrai, nuo opos dydžio nepriklauso. Chirurginis opų gydymas (autodermoplastika) teigiamai veikia paciento gyvenimo kokybę (miegą, emocijas), net 50 proc. pacientų nežino tikrosios opų atsiradimo priežasties.

Adresas susirašinėjimui: V. Jankūnas, KMUK Chirurgijos klinikos Plastinės chirurgijos ir nudegimų skyrius, Eivenių 2, 50010 Kaunas. El. paštas: vjankunas@hotmail.com

References

1. Baker S, et al. Compression therapy for venous leg ulcer. Effective health care 1997;3(4):1-12.
2. Alcaraz A, Kelly J. Treatment of an infected venous leg ulcer with honey dressings. Br J Nurs 2002;11(13):859-66.
3. Hyland ME, et al. Quality of life of leg ulcer patients: Questionnaire and preliminary findings. J Wound Care 1994;3(6): 249-98.
4. Mekkes JR. Causes, investigation and treatment of leg ulceration. Br J Dermatol 2003;148(3):388-401.
5. Gudgalytė I, Triponis V, et al. Postthrombosis syndrome and ulcus trophicum. Peculiarities of surgical and topical treatment. Phlebology 2003;1:6-7.
6. Wissing U, Ek AC, Unosson M. Life situation and function in elderly people with and without leg ulcers. Scand J Caring Sciences 2002;16(1):59.
7. Cornwall JV, Dore CJ, Lewis JD. Leg ulcers: epidemiology and aetiology. Br J Surg 1986;73:693-9.
8. Morrell CJ, Walters SJ, Dixon S, Collins KA, Brereton LML, Peters J, Brooker CGD. Cost effectiveness of community leg ulcer clinics: randomised controlled trial. BMJ 1998; 316 (7143):1487-91.
9. Phillips T, Stanton B, Provan A, Lew R. A study of the impact of leg ulcers on quality-of-life – financial, social, and psychological implications. J Am Acad Dermatol 1994; 31(1):49-53
10. Hamer C, et al. Patients' perceptions of chronic leg ulcers. J Wound Care 1994;3(2):99-101.
11. Smith PDC. The drug treatment of chronic venous insufficiency and venous ulceration. In: Handbook of venous disorders: Guidelines of the American Venous Forum (editorial).

Hodder & Stoughton; 2001. p. 309-21.
12. Franks PJ, et al. Community leg ulcer clinics: effect on quality of life. Phlebology 1994;9:83-6.
13. Brod M. Quality of life issues in patients with diabetes and lower extremity ulcers: patients and caregivers. Quality Life Res 1998;7:365-72.
14. Kumins NH, Weinzweig N, Schuler JJ. Free tissue transfer provides durable treatment for large nonhealing venous ulcers. J Vasc Surg 2000;32(5):848-54.
15. Pamela E. Effect of electrical stimulation on chronic leg ulcer size and appearance houghton physical therapy. J Am Phys Ther Association 2003;83(1):54-60.
16. MacFarlane DE, Baum KF, Serjeant GR. Bacteriology of sickle cell leg ulcers. Trans Roy Soc Trop Med Hyg 1986;80: 553-6.
17. Triponis V. Treatment of venous leg ulcers by compressotherapy and hydrocolloid dressings. Medicina (Kaunas) 2001;5:7-12.
18. Schmeller W, Gaber Y. Surgical removal of ulcer and lipodermatosclerosis followed by split-skin grafting (shave therapy) yields good long-term results in "non-healing" venous leg ulcers. Acta Derm Venereol 2000;80(4):267-71.
19. Margolis DJ. Which venous leg ulcers will heal with limb compression bandages? Am J Med 2000;109:15-9.
20. Schmeller W, Gaber Y, Jones JE, Nelson EA. Surgical removal of ulcer. Skin grafting for venous leg ulcers. Cochrane Library 2002;3:25-30.
21. Meaume S, Gemmen E. Cost-effectiveness of wound management in France: pressure ulcers and venous leg ulcers. J Wound Care 2002;11(6):1006-12.

Received 17 February 2004, accepted 1 June 2004
Straipsnis gautas 2004 02 17, priimtas 2004 06 01