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ORIGINAL ARTICLE

Quality of life psychosocial characteristics in Greek patients with leg ulcers: a case control study

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Key words
Leg ulcer; Psychosocial characteristics; Quality of life

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Abstract

Chronic leg ulcers are a public health problem that can have a significant impact on the patient's physical, socioeconomic and psychological status. The aim of this study is to evaluate the quality of life, anxiety and depression, self-esteem and loneliness in patients suffering from leg ulcers. A total of 102 patients were enrolled in the study. The quality of life, anxiety and depression, self-esteem and loneliness of the patient were assessed using the Dermatology Life Quality Index (DLQI), Hospital Anxiety and Depression Scale (HADS), Rosenberg's Self-esteem Scale (RSES) and the UCLA Loneliness Scale (UCLA-Version 3), respectively. The mean DLQI score was 13·38 ± 2·59, suggesting a serious effect on the quality of life of patients. Those with leg ulcers had statistically significant higher scores according to the HADS-total scale ($P = 0{\cdot}031$) and HADS-anxiety subscale ($P = 0{\cdot}015$) compared with healthy volunteers. Moreover, a statistically significant difference was found between the two groups concerning the UCLA-scale ($P = 0{\cdot}029$). Female patients presented with a higher score of anxiety ($P = 0{\cdot}027$) and social isolation ($P = 0{\cdot}048$), and worse quality of life ($P = 0{\cdot}018$) than male patients. A severe quality of life impairment was documented, reflecting a significant psychosocial impact on patients with leg ulcers.

Introduction

Chronic leg ulcers (1), defined as ulcers that do not heal within 6 weeks, constitute an underestimated public health problem. Their severe clinical manifestation is associated with chronic venous insufficiency, arterial insufficiency, diabetes mellitus, rheumatoid arthritis, trauma, chronic osteomyelitis, haematologic disease, vasculitis and skin tumor. Ulcers are accompanied by numerous symptoms including pain, discharge, pruritus, lower limb swelling and odour (2).

Gender, age, family history, race, body weight, occupation and number of pregnancies rank among the risk factors for ulcer development (1). The recurrence rate of healed leg ulcers is 30% in the first year and 78% in 2 years (3) with diabetes, peripheral vascular disease and chronic venous insufficiency being aggravating factors (4).

The chronicity of leg ulcers has a significant impact on the patient's physical, socioeconomic and psychological status. Ulcer symptoms, such as pain, pruritus, swelling, discharge and malodour, can restrict physical activities, influence mobility, lead to sleeplessness, and constitute a major source of

Key Messages

- the chronicity of leg ulcers leads to significant impact on patients' quality of life psychological status
- the aim of this study is to evaluate the quality of life, anxiety and depression, self-esteem and loneliness in patients suffering from leg ulcers
- leg ulcers are reported to have a negative impact on patients' quality of life

exhaustion and anxiety. Social isolation is a common problem for patients with leg ulcers. The condition restricts the ability of patients to work and excludes them from social activities. In consequence, it leads to psychological problems including feelings of depression (5), reduced willpower, helplessness and decreased self-confidence. The majority of patients take a pessimistic view in regard to the healing of the ulcer over which they feel they have no control (6–8).

In view of the high prevalence of leg ulcers and the distress they cause, this study aims to evaluate the quality of life, anxiety and depression, self-esteem and loneliness in patients suffering from this condition.

Material and methods

Patients who were referred to the Leg Ulcer Unit of Andreas Sygros Hospital for treatment of leg ulcers between January and December 2012 were enrolled in the study. The study protocol was approved by the Ethics Committee of the 'Andreas Sygros' Hospital, and it was carried out in accordance with the Declaration of Helsinki. All patients gave their informed consent after receiving detailed information regarding their condition and treatment options and after reading standardised written material. Patients were considered eligible for inclusion in the study if they were older than 18 years, had not been treated for this condition in the past 3 months and were able to understand the Greek language. Patients with psychiatric history or a history of psychotropic drug use were excluded from the study.

The quality of life, anxiety and depression, self-esteem and loneliness of the patient were assessed using the Dermatology Life Quality Index (DLQI) (9), Hospital Anxiety and Depression Scale (HADS) (10,11), Rosenberg‘s Self-esteem Scale (RSES) (12) and the UCLA Loneliness Scale (UCLA-Version 3) (13,14), respectively.

The DLQI is a validated 10-item questionnaire related to personal relationships, daily activities, leisure and treatment. The maximum score is 30, with 0 indicating the least impairment and 30 the greatest impairment in the patient's quality of life.

The HADS is a self-report rating scale of 14 items, designed to measure anxiety and depression which are most likely to cause psychological distress in patients (seven items for each subscale). Responses to items are indicated on a 4-point Likert Scale from 0 to 3 (score range 0–21, for each subscale), with a high score indicating more symptoms. HADS has been validated in the Greek population (11). In the general population, HADS values were estimated to be HADS: 9·1 ± 6·1, HADS-A: 5·1 ± 3·7 and HADS-D: 3·9 ± 3·1 (11). The RSES is a 10-item questionnaire answered on a 4-point scale. The scores range from 0 to 30; scores of 15–25 are considered to be within the normal range while scores below 15 suggest feelings of low self-esteem.

The UCLA (Version 3) is a 20-item questionnaire which measures the personal perception of loneliness and social isolation; the stronger these feelings are, the higher the UCLA score. The UCLA scale has also been validated in the Greek population (14). In the general population, UCLA-loneliness scale values were estimated to be 40·08 ± 9·50 for young individuals and 31·51 ± 6·92 for the elderly (13).

Patients were evaluated at their first visit to the Leg Ulcer Unit by two independent investigators who had no participation or conflict of interest. Before being examined, patients were assessed while in bed; they answered all questionnaires on their own and went through all the evaluations.

The control group was recruited during the same period of time and included 102 healthy, age- and sex-matched volunteers from the general population, with no personal history of leg ulcer, psychiatric history or history of psychotropic drug use. Participation in the control group was voluntary and without any financial compensation.

Statistical analysis

All data were analysed using the statistical package for social science (SPSS 17·0) for Windows. The *t*-test was used for quantitative analyses and comparison of means, and Pearson's coefficient correlation was also applied. The use of parametric tests with specific psychometric tools in this study has been previously established in numerous studies (15,16). The statistical significance was determined as a P value of 0·05.

Results

A total of 102 patients were included in the study, among whom 49 were female, and 53 were male, aged 34–88 years (mean 62·29 ± 13·41); 49 patients suffered from venous leg ulcers, 31 from arterial leg ulcers and 22 from mixed arterial and venous leg ulcers.

The DLQI score among patients with leg ulcers was 13·38 ± 2·59. The results of the three questionnaires for both groups and the P-values of the quantitative comparisons between the two groups are shown in Table 1. As concerns the HADS-total scale and HADS-A subscale, patients with leg ulcers had statistically significant higher scores compared with healthy volunteers ($P = 0·031$ and $P = 0·015$, respectively). Moreover, a statistically significant difference was found between the two groups concerning the UCLA-scale ($P = 0·029$, Table 1). No statistically significant difference was documented for the total HADS-D subscale and RSES-scale.

The total score of DLQI, total HADS, HADS-A, HADS-D, RSES and UCLA in patients with leg ulcers by gender is presented in Table 2. A statistically significant difference was observed in the DLQI ($P = 0·018$), UCLA ($P = 0·048$) and HADS-A ($P = 0·027$). In contrast, no statistically significant difference was found between the two groups concerning the HADS-total scale, HADS-D and RSES scale (Table 2).

A positive correlation was noted between the total score of HADS-A ($r = 0·882$, $P < 0·0001$) and HADS-D ($r = 0·601$, $P < 0·0001$), and between depression and anxiety ($r = 0·455$, $P < 0·0001$). No correlation was documented between DLQI and UCLA, RSES, HADS-A, HADS-D and the total score of HADS scores. In addition, no correlation was observed between UCLA-scale scores and RSES, HADS-A, HADS-D and total score of HADS scores. Similarly, no correlation was noted between RSES scale scores and the UCLA-scale, DLQI, HADS-D, HADS-A and total score of HADS scores

Table 1 Comparison of anxiety, depression, loneliness and social isolation between patients with leg ulcers and controls

	Patients with leg ulcers (*n* = 102)	Controls (*n* = 102)	*P*-value
Total score HADS-total, mean ± SD	16·92 ± 6·13	15·08 ± 5·9	0·031
Total score HADS-anxiety, mean ± SD	8·99 ± 3·33	7·77 ± 3·74	0·015
Total score HADS-depression, mean ± SD	8·22 ± 2·86	7·82 ± 5·36	0·50
Total score UCLA, mean ± SD	45·72 ± 6·67	43·92 ± 4·91	0·029
Total score Rosenberg, mean ± SD	15·82 ± 2·95	16·73 ± 4·54	0·089

HADS, Hospital Anxiety and Depression Scale; SD, standard deviation.

Table 2 Comparison of quality of life, anxiety, depression, loneliness and social isolation across gender in patients with leg ulcers

	Male patients with leg ulcers (*n* = 53)	Female patients with leg ulcers (*n* = 49)	*P*-value
Total score DLQI, mean ± SD	12·71 ± 2·22	13·90 ± 2·70	0·018
Total score HADS-total, mean ± SD	16·24 ± 6·27	17·67 ± 5·98	0·245
Total score HADS-anxiety, mean ± SD	8·26 ± 3·25	9·73 ± 3·27	0·027
Total score HADS-depression, mean ± SD	8·04 ± 3·10	8·46 ± 2·62	0·463
Total score UCLA, mean ± SD	44·32 ± 6·59	46·96 ± 6·60	0·048
Total score Rosenberg, mean ± SD	15·46 ± 2·70	16·13 ± 3·09	0·254

DLQI, Dermatology Life Quality Index; HADS, Hospital Anxiety and Depression Scale; SD, standard deviation.

Discussion

Ulcers have a marked impact on patients' activities in their daily life, physical function, social life, emotional and mental health status. The impairment of ulcers on the quality of life has been extensively studied (5–8), but only few studies have examined anxiety, depression, loneliness and social isolation in patients suffering from ulcers (4–8,15,16).

As the disease becomes more complex, the patient's psychological status changes, giving rise to a variety of symptoms such as fear, social isolation, anger, depression and negative self-image. It is difficult to determine whether leg ulceration leads to the development of depression or whether people with established depression are at a higher risk of ulcer development (17). Patients with high levels of depression have been found to display passive behavior, low levels of information and poor psychological support (17). In this study, a positive correlation was documented between depression and anxiety in patients with leg ulcers. This could be explained by the restriction of work and daily activities and the patients' concern regarding the progress of ulcer healing and its probable recurrence.

It is not clear whether the reduced social support of these patients is a consequence of their disease or whether patients are voluntarily withdrawing from social life because they fear the reaction of other people to their problem. The symptoms of an ulcer, such as pain, odour, wound drainage and mobility problems, may influence their desire and ability for social interaction (15). Moffatt *et al.* revealed that the majority of patients were single; only a few lived with a spouse, relative or friend, or in an assisted living facility (15).

Patients with chronic illness may have undergone considerable adaptation to their problem and used different coping strategies in order to deal with the relentless demand of their ulceration (18). Edwards *et al.* revealed that socialisation and the peer support of patients with leg ulcers significantly helped to improve their quality of life, morale, self-esteem, pain, healing and functional status. In terms of the outcome of treatment, this study highlights the value of a supportive environment combined with leg ulcer management by trained professionals (19).

The findings of this study confirm those of previous studies in as much as our patients showed a significant impairment in quality of life, self-esteem, anxiety and social isolation. Female patients in the Greek population presented with a higher score of anxiety and social isolation and a worse quality of life than male patients, which could be explained by the fact that leg ulcers are often visible, making women feel unattractive and leading to a perceived loss of their femininity. Moreover, female patients whose mobility and activity has been compromised by their condition seem to experience a feeling of inadequacy more often than male patients, possibly because they feel unable to undertake their traditional role in the home and family as primary caregivers. Greek people face economic difficulties, with reductions in salaries and pensions and high unemployment rates, especially among women. In consequence, women have generally assumed more responsibilities. They cannot afford a household assistant, and all domestic tasks must be carried out by the patients themselves. It would also be reasonable to presume that the social environment is more supportive toward a man than a woman, and that men appear to receive more appropriate management and treatment of their ulcers as they need to be more socially and economically productive.

The management of leg ulcers in Greece follows a traditional medical model, focusing on the healing process rather than on the patient's emotional status. We can recommend services that allow an integrated approach, which include psychological and social support, offering the patient relief from isolation and an opportunity to share common experiences.

References

1. Abbade LP, Lastória S. Venous ulcer: epidemiology, physiopathology, diagnosis and treatment. *Int J Dermatol* 2005;**44**:449–56.
2. Moffatt CJ, Harper P. *Leg ulcers (access to clinical education)*. New York: Churchill Livingstone, 1997.

3. Nelzén O, Bergqvist D, Lindhagen A. Venous and non-venous leg ulcers: clinical history and appearance in a population study. *Br J Surg* 1994;**81**:182–7.
4. Faria E, Blanes L, Hochman B, Filbo MM, Ferreira L. Health-related quality of life, self-esteem and functional status of patients with leg ulcers. *Wounds* 2011;**23**:4–10.
5. Jones J, Barr W, Robinson J, Carlisle C. Depression in patients with chronic venous ulceration. *Br J Nurs* 2006;**15**:S17–23.
6. Herber OR, Schnepp W, Rieger MA. A systematic review on the impact of leg ulceration on patients' quality of life. *Health Qual Life Outcomes* 2007;**25**:44.
7. Keeling D, Price P, Jones E, Harding KG. Social support for elderly patients with chronic wounds. *J Wound Care* 1997;**6**:389–91.
8. Souza Nogueira G, Rodrigues Zanin C, Miyazaki MC, Pereira de Godoy JM. Venous leg ulcers and emotional consequences. *Int J Low Extrem Wounds* 2009;**8**:194–6.
9. Finlay AY, Khan GK. Dermatology Life Quality Index (DLQI)-a simple practical measure for routine clinical use. *Clin Exp Dermatol* 1994;**19**:210–6.
10. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. *Acta Psychiatr Scand* 1983;**67**:361–70.
11. Michopoulos I, Douzenis A, Kalkavoura C, Christodoulou C, Michalopoulou P, Kalemi G, Fineti K, Patapis P, Protopapas K, Lykouras L. Hospital Anxiety and Depression Scale (HADS): validation in a Greek general hospital sample. *Ann Gen Psychiatry* 2008;**7**:4.
12. Rosenberg M. *Society and the adolescent self-image*. Princenton: Princeton University Press, 1965.
13. Russel DW. UCLA Loneliness Scale (Version 3): reliability, validity and factor structure. *J Pers Assess* 1996;**66**:20–40.
14. Kafetsios, K. Adult Attachment, coping with stress and social support as predictors of mental health. Comparative results from Greece and the UK. Abstracts of the International Conference in Personal Relationships. Brisbane: University of Queensland, 2000:38–39.
15. Moffatt CJ, Franks PJ, Doherty DC, Smithdale R, Steptoe A. Psychological factors in leg ulceration: a case-control study. *Br J Dermatol* 2009;**161**:750–6.
16. 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**:49–53.
17. DiMatteo RR, Lepper HS, Grohan TW. Depression is a risk factor for non compliance with medical treatment: meta-analysis of the effects of anxiety and depression on patient adherence. *Arch Intern Med* 2000;**160**:2101–7.
18. Maes S, Leventhal H, de Ridder DTD. Coping with chronic diseases. In: Zeidner M, Endler S, editors. *Handbook of coping. Theory, research and applications*. New York: John Wiley, 1996:221–5.
19. Edwards H, Courtney M, Finlayson K, Shuter P, Lindsay E. A randomised controlled trial of a community nursing intervention: improved quality of life and healing for clients with chronic leg ulcers. *J Clin Nurs* 2009;**18**:1541–9.