

Quality of Life in Chronic Leg Ulcer Patients

An Assessment According to the Nottingham Health Profile

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Chronic leg ulcer is a disease of long duration, occurring predominantly in elderly people. Traditionally, little interest has been devoted to the study of the impact of this disease on life quality. In the present study the Nottingham Health Profile (NHP) was used to assess disease influence on six areas of daily life, namely: pain, physical mobility, sleep, energy, emotional reactions and social isolation. Standard questionnaires were distributed to patients with chronic leg ulcers of venous, arterial or mixed venous-arterial origin, treated at the Department of Dermatology. Complete data were obtained from 125 patients. The disease had a marked impact on the patient's subjectively perceived health. Males exhibited remarkably elevated scores, compared to the normative scores for men, especially in the areas of pain, emotional reactions, social isolation and physical restrictions. For women the impact of leg ulcer disease, although obvious, seems much less marked than for males. An exceptionally long median duration of leg ulcer disease was found among shop-assistants. It is possible that preventive measures should be undertaken in this group. The duration of leg ulcer disease did not seem to influence the quality of life. Patients with long disease duration in fact reported fewer problems than those with shorter duration, suggesting adaptive mechanisms. This study indicates that male leg ulcer patients should be more closely observed for symptoms of emotional stress, pain, social isolation and impaired physical mobility. More efforts should be made to alleviate pain. Above all this study underlines the importance of considering not only the ulcer but the whole patient.

(Accepted March 29, 1993.)

Acta Derm Venereol (Stockh) 1993; 73: 440-443.

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Chronic leg ulcers are common in the elderly population. Prevalence ranges from 0.12% (patients seeking care) to 0.58% (including patients treating their ulcers by themselves) (1, 2). It can be estimated that 30,000-40,000 men and women in Sweden suffer from this disease.

The care of leg ulcer patients rests mainly on primary care and departments of dermatology (1-3). Leg ulcer patients are, however, due to their high age and multimorbidity, cared for by many sectors within the health care system. It is also well known that many treat their ulcers at home.

It has been cynically suggested that an ulcer for some patients may act as a ticket to social contact with the care-giver, and that the patients do not really want their ulcers to heal (4-6).

During recent years many efforts have been made to evaluate the effects of different local treatments of leg ulcers. The leg ulcer patients' perception of quality of life has, however, not gained much attention from researchers.

The impact of chronic disease on health is closely related to personal, social and environmental factors. Subjective assessment of quality of life or health status has been found to add important dimensions to objective measurements, and a number of markers and tests have been developed and evaluated in attempts to define quality of life (7).

The Nottingham Health Profile (NHP) was developed in Great Britain and has been extensively tested for reliability and validity (8, 9). NHP was translated into Swedish by Ingela Wiklund according to British standards. Reliability and validity of NHP have been tested also with the Swedish version (9, 10). NHP has been used in several quality of life studies, including patients with arthrosis of the hip joint (8, 11), stroke (12), myocardial infarction (10) and peripheral vascular disease (13).

The NHP is a short, two-part questionnaire, the first part of which measures discomfort or distress in six areas, namely: pain, physical mobility, sleep, energy, emotional reactions and social isolation. A defined number of questions within each of the six areas (7, 7, 5, 3, 8 and 5 questions, respectively) have to be answered by yes or no. Each question is weighted according to its influence on quality of life and the results are summarized within each area. Part 2 of the NHP focuses on areas of daily life, such as work, looking after the house, social, home and sex life. In this part only the percentage of "yes"-answers is registered.

The purpose of this study was to describe the leg ulcer patient's subjective perception of health related to quality of life using only the first part of the NHP, since the second part contains questions related to work which are irrelevant in this age group. Sex, age, ulcer duration and present or previous occupation were used to categorize the patients in groups for comparison. Sex- and age-adjusted normal score values were used for comparison (14).

MATERIAL AND METHODS

Inclusion criteria

Consecutive patients with leg ulcers of venous, arterial and mixed venous-arterial etiology who were seeking care at the Department of Dermatology during a 6-month period were included. No other types of wounds were included. All patients had chronic ulcer disease, and ulcers with short duration were recurring ulcers.

Exclusion criteria

Patients with restriction of vision and mental or physical capacity, who were not able to fill in the form by themselves, were excluded. So were patients in wheel-chairs and patients who were bedridden.

Data were obtained from 154 patients. Twenty-nine of 154 forms could not be evaluated due to improperly filled-in background data or

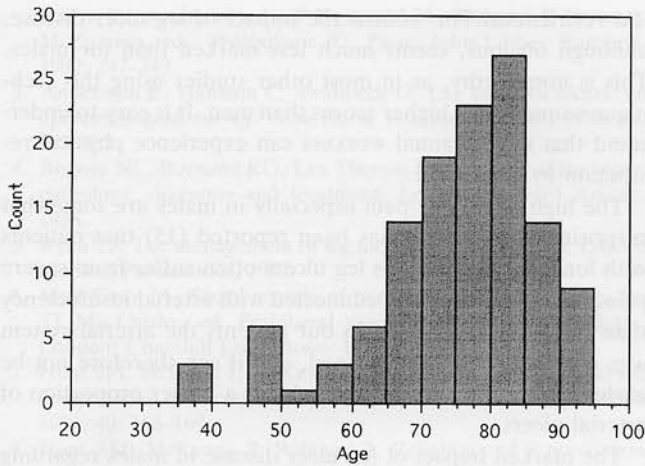


Fig 1. Age distribution for 125 patients with leg ulcers.

≥10 missing answers, leaving 125 forms for evaluation. The patients were categorized by present or previous occupation. Four categories were used: white-collarers ($n = 33$), shopassistants ($n = 17$), manual workers ($n = 53$) and housewives ($n = 22$).

Procedure

NHP forms and pre-stamped and pre-addressed envelopes were delivered by the care-giving nurse to all patients who were willing and able to fill in the form. The patients were informed about their rights not to participate according to the Helsinki Declaration. The anonymity of the patient was guaranteed. All nurses involved were informed verbally prior to the study start.

The responses were scored according to the NHP manual (14). The scores for leg ulcer patients were compared to scores from a normal population (14), and all values are expressed as % of the normal value for age and sex.

For statistical analysis the Mann-Whitney U-test was used.

RESULTS

Demographic data

Forms from 51 men and 74 women were evaluated. Median age was 77 years (men: 74 r.36–91, women: 78 r.37–93). Age distribution is shown in Fig 1. The group of housewives had higher median age (83.5 years) than the other groups. Median duration of leg ulcer disease in the four professional groups is shown in Fig. 2. The disease duration in the shopworker-group was longer than in the other groups (Md = 240 months). The difference in disease duration comparing shopassistants and other occupations grouped together was statistically significant ($p < 0.04$).

Global NHP score

High score indicates reduction of the different quality of life parameters studied. The global NHP score for leg ulcer patients was $M = 173\%$ of the age- and sex-matched normal score.

Male leg ulcer patients had a global score amounting to 232% of the normal score compared to 132% for females ($p < 0.06$ comparing males-females).

Global scores categorized after previous or present profession and compared with the mean age- and sex-adjusted normal score were 136% for house wives, 138% for shopassistants, 218% for manual workers and 143% for white-collarers.

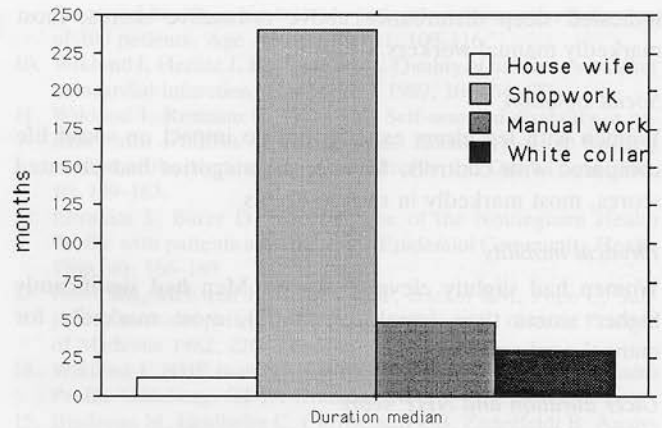


Fig 2. Disease duration (months since first ulcer) in 125 patients with leg ulcers, subdivided into professions.

NHP score of different areas in relation to sex and profession

The different quality of life parameters, lack of energy, pain, emotional status, sleep, social isolation and physical mobility, were analysed in relationship to age and sex. Total score in each area for men and women is shown in Fig. 3.

Lack of energy

Mean scores in male leg ulcer patients were generally higher than in normal populations. Males had higher scores than females. The difference was not, however, statistically significant. The highest scores were found in male manual workers.

Pain

Pain scores were elevated in all categories of patients. The highest values were found in male manual workers, the lowest in female shopassistants. The overall higher values for males compared to females were statistically significant ($p < 0.03$).

Emotional reaction

The scores for women were only marginally different from normal scores. Men in all categories had higher scores.

Sleep disturbance

In women sleep disturbance was marginal. All groups of men

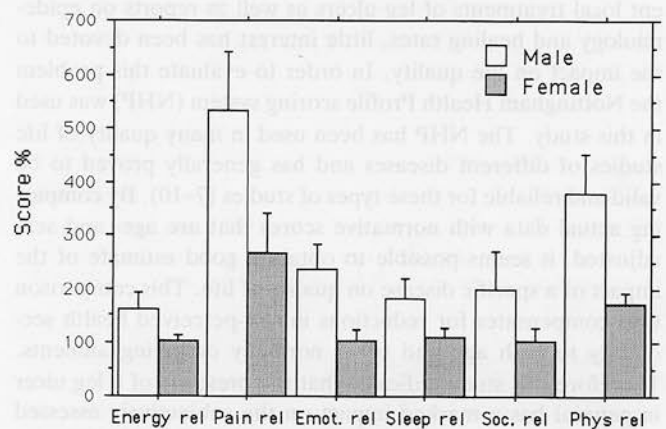


Fig 3. Score for 6 different NHP areas in 125 patients with leg ulcers, subdivided into males and females, expressed as % of values for an age- and sex-matched normal population.

indicated sleep disturbance above normative scores, most markedly manual workers.

Social isolation

Women with leg ulcers experienced no impact on social life compared with controls. Men in all categories had elevated scores, most markedly in shopassistents.

Physical mobility

Women had slightly elevated scores. Men had significantly higher scores than females ($p < 0.03$), most markedly for manual workers.

Ulcer duration and NHP score

The median duration of the leg ulcer was 3 years (r. 1 month–63 years). Forty-one patients (33%), 17 men and 24 women, had an ulcer duration of ≥ 11 years. The mean global score for patients with long ulcer duration was the same as the mean global score for the whole group.

High-score patients

Twenty-two out of 125 patients (18%), 6 men and 16 women (age Md 80.5 years, r. 58–93), had a mean score of > 50 , a magnitude which indicates severe problems. Seven of these patients had an ulcer duration of ≥ 11 years. Patients with a high score were evenly distributed over the different professional categories.

DISCUSSION

Leg ulcer is a disease of long duration, occurring predominantly in elderly people (1–3). These facts have been confirmed in this study. The present study group had a higher percentage of males (males/females 2:3) than usually found and than that reported in a demographic survey of leg ulcer patients in Malmö (1). Since the study group was recruited from the Department of Dermatology as consecutive patients, this discrepancy seems merely coincidental and should have no influence on results. From previous studies at the Department of Dermatology it is known that a maximum of 15% has an arterial component.

While there are numerous reports in the literature on different local treatments of leg ulcers as well as reports on epidemiology and healing rates, little interest has been devoted to the impact on life quality. In order to evaluate this problem the Nottingham Health Profile scoring system (NHP) was used in this study. The NHP has been used in many quality of life studies of different diseases and has generally proved to be valid and reliable for these types of studies (7–10). By comparing actual data with normative scores that are age- and sex-adjusted, it seems possible to obtain a good estimate of the impact of a specific disease on quality of life. This comparison thus compensates for reductions in self-perceived health secondary to high age and other normally occurring ailments. Therefore this study indicates that the presence of a leg ulcer in general has a marked impact on the subjectively assessed perceived health. Males exhibited remarkably elevated scores, compared to the normative scores for men, especially in the areas of pain, emotional reactions, social isolation and phys-

ical restrictions. For women the impact of leg ulcer disease, although obvious, seems much less marked than for males. This is noteworthy, as in most other studies using this technique women have higher scores than men. It is easy to understand that male manual workers can experience physical restriction by a leg ulcer.

The high scores for pain especially in males are somewhat surprising. Although it has been reported (15) that patients with long-standing venous leg ulcers often suffer from severe pain, pain is usually more connected with arterial insufficiency than with venous disease. In our patients the arterial system was not specifically investigated, and it can therefore not be excluded that the male group includes a higher proportion of arterial ulcers.

The marked impact of leg ulcer disease in males regarding emotional problems and social isolation may partly be explained by the fact that men of this generation are less accustomed to take care of "physical expressions", which have always been part of women's life. The exuding, sometimes malodorous ulcer is probably regarded as more disgusting and disturbing by men than by women. Whatever the causes, the problems of social isolation and emotional reactions in male leg ulcer patients should be observed. If these problems are consistently and actively addressed, a dedicated care-giver can probably facilitate and encourage a more active social life.

Although the majority of the patients were retired, it seemed to be of interest to relate findings to previous or present occupation in order to evaluate a possible professional influence. The exceptionally long median duration of ulcers in the group of shopassistents is noteworthy. It is possible that this is a risk group to be focused on, regarding early signs of venous disease, so that adequate preventive action could be taken to avoid later ulcerations.

An important part in the rehabilitation of leg ulcer patients is to encourage physical training (16). In this study high scores for physical restriction were found in all groups of men. Especially the high scores for male white-collars and manual workers are noteworthy, as these were the youngest of all patients. Information about the importance of physical activity may have been insufficient, and it is quite possible that at least some groups of leg ulcer patients could benefit from specially designed exercise programmes, preferably lead by a physiotherapist. Such an approach might also help the patients to overcome their tendency to social isolation, to some extent.

The duration of the leg ulcer did not seem to influence quality of life in other aspects than pain. Patients with a long ulcer history in fact reported fewer problems than patients with shorter duration of illness. This is contrary to the previously reported positive relation between duration of chronic illness and impaired quality of life (8). An explanation might be that adaptation mechanisms allow the patient to accept the problems associated with the leg ulcer.

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