

INVESTIGATIVE REPORT

Changes in Quality of Life in Persons with Eczema and Psoriasis After Treatment in Departments of Dermatology

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The objective of this study was to assess the impact of chronic dermatological diseases on quality of life (QoL) of Norwegian patients following in-patient management. QoL was measured by the Norwegian version of the Dermatology Life Quality Index, a validated, self-administered questionnaire. Adult in-patients with psoriasis and eczema were selected for one year from the dermatological departments in Norway. A total of 212 patients were included, and 126 patients (50% men, 85 with psoriasis and 41 with eczema, mean age 46 years) completed the questionnaires at time of hospital admission and one week after discharge. The patients reported adverse impact on QoL, but no differences between the psoriasis and eczema groups could be demonstrated. Patients with psoriasis improved from 18.3 (7.6) (mean (SD)) to 12.1 (8.2) ($p < 0.01$), and those with eczema improved from 20.0 (6.0) to 14.4 (7.8) ($p < 0.01$). Seventy percent of the patients showed improvement, 20% remained unchanged and 10% worsened. The parameters for which the most improvement was seen were those that were of most concern to the patients, i.e. their symptoms and embarrassment. In conclusion, the results are consistent with previous international studies. Key words: eczema and psoriasis; QoL; evaluation study.

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Figures from Statistics Norway (patient statistics 1998 to 2000) show that 7,159 patients with diseases of the skin and dermis were discharged from hospitals in Norway in the year 2000. For the same year, the number of days in hospital for this group was 52,887. Many of the patients suffer from eczema and psoriasis.

Research shows that living with a chronic dermatological disease, such as eczema and psoriasis, can negatively affect quality of life (QoL). QoL is therefore an important objective for clinical dermatological activity and an important indicator in dermatological research (1). Eczema and psoriasis can affect QoL in different

ways, including negative body image, difficulties in socializing, ability to work, performance of daily activities and interests, relationships and sexuality, financial problems and stigmatization (2).

A study from Norway shows that psoriasis patients report having significantly poorer health than a selection of the general population (3, 4). This study also shows that the patients who are hospitalized have the greatest problems in relation to living with the disease. Similar findings are confirmed in other studies (5).

We see the same pattern within the eczema group (1, 6). Studies show that many adults with atopic eczema have problems with work and school attendance especially. Sleep problems, problems related to sports, holidays and social and personal relationships are also described (1). This patient group reports similar levels of QoL as other groups (7).

Hospitalization is often necessary to treat flare-up of disease symptoms. The hospital treatment provided is individual, organized far more actively and is more goal-oriented than treatment at home and at outpatient clinics. The goal of treatment for patients with eczema and psoriasis is not cure, but symptom reduction and improvement in physical, emotional and social functional abilities. How eczema and psoriasis affect the functional ability of the individual varies from person to person. It is therefore necessary that treatment, nursing and care for these groups of patients with accompanying evaluation are based on criteria that include the patients' own experiences of QoL. Until now, few studies have evaluated the change in QoL after hospitalization in patients with eczema and psoriasis. The studies that have been done show positive changes in relation to QoL (8, 9). In this article we report the results from the first Norwegian study.

MATERIALS AND METHOD

Design

The study uses a pre–post test design and is a multi-centre study including departments of dermatology at the regional hospitals. Data were collected by questionnaires at the time of admission to departments of dermatology and one week after discharge. The patients for the study were selected and questioned by the

nurse heading the project in consultation with doctors in the different departments. The study was authorized by the Norwegian Social Science Data Archives and the Regional Committee for Medical Ethics – Region II.

Sample

The sample comprises 212 persons with the diagnoses psoriasis and chronic eczema who were hospitalized in departments of dermatology over a period of one year and who agreed to participate in the study. Of these, 126 (59%) answered both tests and fulfilled the criteria for QoL report (reported regarding 9 of the 10 items in the QoL index used). No significant differences appeared between those who answered the questionnaire satisfactorily and those who did not do so at the different times as concerns age, gender, diagnosis, marital status and education.

Of the 126 patients, 85 had psoriasis and 41 had eczema and 63 of the selection were men. The mean age was 46 years (SD 15.5), range 18–90 years. Most were married ($n = 66$), and 78% of the respondents had education from the primary level up to and including upper secondary/advanced level. Twenty-seven percent stated that they were social security recipients. Fifty-six (46%) reported not having been hospitalized in departments of dermatology during the past 2 years, while 26 (21%) had been hospitalized once and 20 (16%) twice (Table I).

Instruments

The questionnaire completed at time of admission contained questions about age, gender, civil status, education, work and illnesses. In addition, the patients were asked about the experience of having a dermatological disease, what kind of information about career choice and social security rights they had received, access to health services and expectations for the hospital stay. Standardized forms were also used to measure the experience of coping, disease-specific QoL and health status. The questionnaire at discharge consisted of one standardized form for disease-specific QoL and questions regarding patient satisfaction with hospitalization.

This article uses demographic data, data about experiences with the disease and the hospital stay, and the Norwegian version of the Dermatology Life Quality Index (DLQI-N). The DLQI was originally developed by Finlay (1) and has been used in many studies internationally. The form was previously translated into Norwegian and validated in relation to Norwegian psoriasis patients (10). The DLQI-N consists of 10 questions dealing with symptoms of the skin, self-perception of the

skin, limitations in self-expression because of dermatological diseases and treatment of these. The answer alternatives for each individual question range from 0 (not at all) to 3 (considerable), and are summed up to a total score (0–30). A high value indicates poor disease-specific QoL. The questions can also be divided into the following six areas: symptoms and feelings (2 questions), daily activities (2 questions), leisure time (2 questions), personal relationships (2 questions), work and school (1 question) and stress with treatment in the home situation (1 question). To evaluate the total score, it is acceptable that only one question on the form is unanswered (<http://www.ukdermatology.co.uk/quality/index.asp>). In previous studies, the DLQI has proven to be sensitive to changes in clinical status (11).

Statistics

SPSS Version 11 software was used to analyse the data in this study. To analyse changes from time of hospital admission to 1 week after discharge for the entire group and between groups, paired *t*-tests and UNIANOVA analyses were used. UNIANOVA analyses were also used to adjust for gender and age and to identify possible interactions between these and changes. Independent *t*-tests and cross-tables with Pearson's χ^2 test are used to look at differences between the groups of patients and in relation to different questions about experiences with the disease and the hospital stay.

RESULTS

Living with eczema and psoriasis before hospitalization

Most of the patients experience difficulties due to having eczema and psoriasis. Fifty-five percent reported that they think of it as a problem every day, 21% often think about it and 19% sometimes think about it. There are no differences between the diagnosis groups in relation to how difficult it is to live with the diseases.

During the 4 months prior to hospitalization, 19% of the selection had contact with health personnel several times a week because of the dermatological diseases. The eczema group has significantly more contact with health personnel than the psoriasis group ($p < 0.05$).

The psoriasis group reports significantly higher expectations for the hospital stay in relation to the health problem than the eczema group ($p < 0.01$). On a scale from 1 (no significant improvement) to 10 (it will cure me completely), the psoriasis group has a mean of 7.3 (SD 1.7) and the eczema group 6.3 (SD 2.2).

Changes in QoL

The results show that the QoL as a whole and within the sub-areas (symptoms and feelings, daily activities, leisure time, employment and school, personal relationships) has improved significantly for the entire selection and for the sub-groups psoriasis and eczema (Table II). We see the greatest change for the group as a whole within the sub-area symptoms and feelings (27%). The group with eczema does not report significant improvement in relation to treatment.

Table I. *Characteristics of the sample*

Characteristics	Psoriasis ($n = 85$)	Eczema ($n = 41$)	Total ($n = 126$)
Gender (n)			
Men	41	22	63
Women	44	19	63
Age, years (mean (SD))	48.3 (14.8)	41.7 (16.1)	46.3 (15.5)
Length of disorder, years (mean (SD))	18.9 (13.9)	20.4 (16.0)	19.4 (14.6)
Contact with health personnel the last four months before admission (n)			
Several times a week	19	5	24
One day a week	4	1	5
One day every fortnight	6	9	15
One day a month	11	14	25
Less than 1 day a month	42	11	53
Number of admissions during the last 2 years, mean (SD)	1.2 (1.8)	1.3 (1.4)	1.2 (1.6)

Table II. Mean (SD) for total score Dermatology Life Quality Index (DLQI-N), sub-areas at admission (T1), one week after discharge (T2) and percent change in score

DLQI-N	Psoriasis (n = 85)			Eczema (n = 41)			Entire selection (n = 126)		
	Mean (SD)		% change ^a	Mean (SD)		% change ^a	Mean (SD)		% change ^a
	T1	T2		T1	T2		T1	T2	
Total score (0–30)	18.3 (7.6)	12.1 (8.2)	20.7**	20.0 (6.0)	14.4 (7.8)	18.7**	18.8 (7.1)	12.9 (8.1)	19.7**
Domains									
Symptoms and feelings (0–6)	4.3 (1.5)	2.6 (1.8)	28.3**	4.8 (1.3)	3.3 (1.7)	25.0**	4.5 (1.5)	2.9 (1.8)	26.7**
Daily activities (0–6)	3.9 (1.8)	2.6 (1.9)	21.7**	3.7 (1.5)	2.8 (1.6)	15.0**	3.8 (1.7)	2.6 (1.8)	20.0**
Leisure time (0–6)	4.0 (2.0)	2.6 (2.2)	23.3**	4.4 (1.8)	3.3 (2.0)	18.3**	4.1 (2.0)	2.8 (2.1)	21.7**
Work and school (0–3)	1.4 (1.4)	1.1 (1.3)	10.0*	2.4 (0.9)	1.6 (1.3)	26.7**	1.7 (1.3)	1.3 (1.3)	13.3**
Personal relationships (0–6)	2.7 (1.8)	1.7 (1.7)	16.7**	2.9 (2.0)	1.9 (1.9)	16.7**	2.7 (1.9)	1.8 (1.8)	15.0**
Treatment (0–3)	2.0 (1.0)	1.6 (1.0)	13.3**	1.8 (0.9)	1.6 (0.9)	6.7	2.0 (1.0)	1.6 (1.0)	13.3**

^aScore (T1–T2)/maximum attainable total score × 100.

* $p < 0.05$.

** $p < 0.01$.

Seventy percent of the patients report better QoL, 20% report no change and 10% report poorer QoL score. There is a slightly greater change among psoriasis patients than among those with eczema, but this difference is not significant.

The results show no significant differences in change pattern for QoL as a whole and within the sub-areas when adjustments are made for gender and age in the groups. Interaction analyses show that the change is about the same in old and young subjects and in men and women within each of the diagnosis groups.

Experiences from the hospital stay

The patient group reports that they are satisfied with the treatment they received during the hospital stay. The mean value is 8.7 (SD 1.6) on a scale from 0–10, where 0 indicates “not at all satisfied”, 6 indicates “moderately satisfied” and 10 “very satisfied”. The patient group is also satisfied with the information that was provided about examinations, results and tests and what kind of problems they could expect in the future (7.9 (SD 2.7)). Similar patterns are seen in relation to the experience of care from doctors and nurses (doctors 8.5 (SD 1.8), nurses 9.0 (SD 1.6)). The group reports a somewhat lower mean score for what the hospital stay has meant for the disease than within the other areas (6.7 (SD 2.3)). There are no significant differences between the disease groups concerning these experiences from the hospital stay, with the exception of to what degree they felt they learned what was necessary about results and tests. In this area, the eczema group reports a significantly lower mean score than the psoriasis group ($p < 0.001$).

DISCUSSION

This study identifies positive changes in QoL after treatment in departments of dermatology in groups with eczema and psoriasis. Similar findings are described in

the relatively few international studies that have been done in this area (8, 9, 12–15). The greatest improvement in QoL is for the group as a whole related to the sub-area symptoms and feelings. This also coincides with previous research (8).

In a study of the effect of hospitalization on QoL for persons with serious degrees of dermatological diseases conducted in the USA and Great Britain, it became apparent that QoL was significantly better after in-hospital treatment. The DLQI total score was reduced from 14.9 to 8.2 in Great Britain (change 22%) and from 12.0 to 8.5 in the USA (change 12%) (15). Improvement for the entire group in our study is 20%, and thus lies between the values from the USA and Great Britain. However, our results show higher values at admission to and after the stay in hospital. The explanation for this might be that the studies in the USA and Great Britain include more diagnosis groups than eczema and psoriasis. Another explanation might be that Norwegians score lower on disease-specific QoL. A recently published study among psoriasis patients in the Nordic countries shows that Norwegians report the poorest disease-specific QoL. Kurwa & Finlay (8) conclude with a considerable improvement in QoL in patients with eczema and psoriasis as a result of treatment by hospitalization. Seventy-three percent of 181 patients reported improvement in the QoL, 5.5% experienced no change and 21.5% got worse. Our study shows that the same percentage of the sample have an improved QoL (70%), a higher percentage who do not have an improved QoL (20%) and a smaller percentage who have a poorer QoL (10%). The improvement in QoL for psoriasis patients (23% vs. 20.5%) and eczema (22% vs. 18.4%) is slightly lower in our study compared with Kurwa & Finlay. It is interesting that as many as 30% do not have any improvement or deteriorate in their disease-specific QoL after hospitalization. Future studies should focus on this group of patients to evaluate whether it is possible to treat the group in a better

way. An improvement in QoL for up to 3 months has been demonstrated in psoriasis patients after in-hospital treatment (9). Focus on duration in change in QoL is at least as important as the immediate improvement at the end of treatment (16). Changes in QoL should also be an effect parameter in the comparison of different treatments for patients with eczema and psoriasis in the future (17).

REFERENCES

1. Finlay AY. QoL assessments in dermatology. *Semin Cutan Med Surg* 1998; 17: 291–296.
2. Wahl AK, Gjengedal E, Hanestad BR. The bodily suffering of living with severe psoriasis: in-depth interviews with 22 hospitalized patients with psoriasis. *Qual Health Res* 2002; 12: 250–261.
3. Wahl A, Loge JH, Wiklund I, Hanestad BR. The burden of psoriasis: a study concerning health-related QoL among Norwegian adult patients with psoriasis compared with general population norms. *J Am Acad Dermatol* 2000; 43: 803–808.
4. Wahl A, Moum T, Hanestad BR, Wiklund I. The relationship between demographic and clinical variables, and QoL aspects in patients with psoriasis. *Qual Life Res* 1999; 8: 319–326.
5. Zachariae R, Zachariae H, Blomqvist K, Davidsson S, Molin L, Mørk C, et al. QoL in 6497 Nordic patients with psoriasis. *Br J Dermatol* 2002; 146: 1006–1016.
6. Skoet R, Zachariae R, Agner T. Contact dermatitis and QoL: a structured review of the literature. *Br J Dermatol* 2003; 149: 452–456.
7. Kiebert G, Sørensen SV, Revicki D, Fagan SC, Doyle JJ, Cohen J, et al. Atopic dermatitis is associated with a decrement in health-related QoL. *Int J Dermatol* 2002; 41: 151–158.
8. Kurwa HA, Finlay AY. Dermatology in-patient management greatly improves life quality. *Br J Dermatol* 1995; 133: 575–578.
9. Vensel E, Hilley T, Trent J, Taylor JR, Kirsner RS, Kerdel FA, et al. Sustained improvement of the QoL of patients with psoriasis after hospitalization. *J Am Acad Dermatol* 2000; 43: 858–860.
10. Mørk C, Wahl AK, Moum T. The Norwegian version of the dermatology life quality index: a study of validity and reliability in psoriatics. *Acta Derm Venereol* 2002; 82: 347–351.
11. Mazzotti E, Picardi A, Sampogna F, Sera F, Pasquini P, Abeni D, et al. Sensitivity of the dermatology life quality index to clinical change in patients with psoriasis. *Br J Dermatol* 2003; 149: 318–322.
12. Hurwitz D, Kerdel FA, Kirsner RS. Hospitalisation for skin disease improves QoL. *Arch Dermatol* 1997; 133: 797–798.
13. Badia X, Mascaro JM, Lozano R. Measuring health-related QoL in patients with mild to moderate eczema and psoriasis: clinical validity, reliability and sensitivity to change of the DLQI. *Br J Dermatol* 1999; 141: 698–702.
14. Zachariae R, Zachariae C, Ibsen H, Mortensen JT, Wulf HC. Dermatology life quality index: data from Danish inpatients and outpatients. *Acta Derm Venereol* 2000; 80: 272–276.
15. Ayyalaraju RS, Finlay AY, Dykes PJ, Trent TJ, Kirsner RS, Kerdel FA. Hospitalization for severe skin disease improves QoL in the United Kingdom and the United States: a comparative study. *J Am Acad Dermatol* 2003; 49: 249–254.
16. Wahl AK, Mørk C, Cooper BA, Padilla G. No long-term changes in psoriasis severity and quality of life following climate therapy. *J Am Acad Dermatol* 2005; 52: 699–701.
17. Mørk C, Wahl AK. Improved QoL among patients with psoriasis after supervised climate therapy at the Canary Islands. *J Am Acad Dermatol* 2002; 47: 314–316.