

## Some Observations on Reporting Quality of Life in Treatment of Psoriasis in Outpatient Clinics

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Current guidelines for psoriasis treatment (1) recommend that patients' reported quality of life (QoL) is evaluated in addition to clinical parameters. The Dermatology Life Quality Index (DLQI) is a frequently-used QoL instrument (2, 3). DLQI is a dermatology-specific questionnaire comprising 10 questions, which takes only a few minutes to complete and has been used to determine QoL in various skin diseases, including psoriasis (2, 3). DLQI can detect even small changes in patients' disease-related QoL, and consequently has often been used to follow-up treatment (2). It has also been applied in several clinical trials of biological pharmaceuticals.

The visual analogue scale (VAS) is a one-dimensional scale that can be used by patients to report a range of different symptoms (4), including severity of skin diseases (5–9). DLQI and VAS have been used simultaneously in controlled clinical studies on skin diseases (5–9). Correlation between VAS and DLQI has been demonstrated in patients with atopic dermatitis (5, 8), psoriasis (5) and ichthyosis (6). A positive correlation between VAS and DLQI, as well as between VAS and Psoriasis Activity and Severity Index (PASI), was shown in a recent study (7). The purpose of the present pilot study was to evaluate whether DLQI and/or VAS could be recommended for use in everyday practice for the purpose of treatment follow-ups in psoriasis in Swedish outpatient clinics.

### PATIENTS AND METHODS

Four dermatological departments participated in the study (Departments of Dermatology at Falu Lasarett, Falun, University Hospital Örebro, Gävle Lasarett and Danderyd Hospital, Sweden). A total of 48 patients were included (23 women, 25 men). Their mean age was 50 years (women 48.6, men 51.7 years) and mean disease duration was 22.9 years (women 20.4, men 26.2 years). Out-patients, in whom treatment for psoriasis was started, followed up, or changed, were included. Data were gathered from 2 visits. At each visit the patients completed the DLQI questionnaire and graded their psoriasis symptoms at the visit in question and at its worst, using 2 VAS scales (0–10). At the first visit, 34 patients were already receiving some treatment (no biologicals), 12 started therapy, and complete data were missing for 2 patients. At a follow-up visit after 8 weeks, 5 patients had changed their treatment. Information about treatment and disease duration was recorded. Comparisons between groups and between first and second visits were performed using a non-parametric sign test. Mean age and disease duration was analysed using a Student's *t*-test. An explorative correlation was performed, looking at VAS and DLQI at the first and second visits. All analyses were performed using the STATISTICA™ software system (10). The study was approved by the Research Ethics Committee, Uppsala, Sweden.

### RESULTS AND DISCUSSION

Most patients combined topical treatment with different ultraviolet (UV) therapies ( $n=32$ ) or methotrexate ( $n=9$ ) and 8 had topical treatment only. The reported DLQI at the first visit had a median value of 9 for women and 7 for men (not significant). There was a statistically significant decrease in DLQI at the 8-week follow-up (from mean 8.2 to 3.7;  $p<0.05$ ), with no gender differences.

The self-evaluation of disease severity using the one-dimensional VAS scale shows that the patients' global assessment of their disease at its worst had decreased at the second visit (7.9–6.6;  $p<0.05$ ), with no gender differences. However, their grading of present status decreased even more (5.9–3.2;  $p<0.05$ ), with no gender differences.

The correlation between VAS at present and DLQI at present was significant ( $p<0.05$ ), both at the first ( $r=0.47$ ) and second visits ( $r=0.67$ ) (Table I). There was also a good correlation between changes in VAS at present and changes in DLQI between the 2 visits (Fig. 1).

The DLQI difference between the visits for those without any other significant disease was 5.3 and for those with other diseases was 3.2, a difference of 2.1 ( $p<0.05$ ). No statistically significant differences were found between patients with and without treatment for their psoriasis at the first visit. However, the number of patients in each group was small.

Both DLQI and VAS were easy to handle in the clinical situation (they took only a few minutes to complete) and they showed good mutual correlation. We found that patients with another chronic disease in addition to psoriasis reported less improvement in DLQI than did the rest of the patients. The small number of patients included in the study did not allow us to explore the possible effect of specific treatments.

It has been shown for psoriasis (11) and atopic dermatitis (12) that self-reported QoL improves over longer time-periods, 11 and 6 years, respectively, independently of treatments or interventions. Possible explanations for this (13) are that it may be due to an adaptation to the disease or even to resignation of the patients. This phenomenon is probably different from the increase in QoL found in our study during the shorter time-perspective of 8 weeks. Self-reported QoL depends on several factors and probably on complex interactions in the patient's life situation (11–13). Our results suggest that DLQI scores can be improved in the short-term by interacting with patients, i.e. either

Table I. Possible correlations between visual analogue scale (VAS) and Dermatology Life Quality Index (DLQI) at first and second visits and differences at first and second visits. Significant correlations ( $p < 0.05$ ) in italics

	Mean	SD	Visit 1 (n=48)			Visit 2 (n=48)			Visit 1–Visit 2		
			VAS at worst	VAS now	DLQI	VAS at worst	VAS now	DLQI	DLQI	VAS now	VAS at worst
Visit 1											
VAS at worst	7.91	1.81	1.00								
VAS now	5.94	2.4	<i>0.677</i>	1.00							
DLQI	8.19	4.53	<i>0.516</i>	<i>0.466</i>	1.00						
Visit 2											
VAS at worst	6.61	2.25	<i>0.341</i>	<i>0.317</i>	-0.006	1.00					
VAS now	3.18	2.41	<i>0.454</i>	<i>0.497</i>	0.254	<i>0.413</i>	1.00				
DLQI	3.69	3.83	<i>0.366</i>	0.216	<i>0.476</i>	0.269	<i>0.675</i>	1.00			
Visit 1–Visit 2											
DLQI	4.5	4.33	-0.243	-0.298	-0.627	0.245	<i>0.332</i>	<i>0.387</i>	1.00		
VAS now	2.76	2.41	-0.220	-0.499	-0.211	0.096	<i>0.503</i>	<i>0.459</i>	<i>0.628</i>	1.00	
VAS at worst	1.29	2.36	-0.440	-0.216	-0.402	<i>0.693</i>	0.046	-0.001	<i>0.420</i>	0.261	1.00

in a therapy discussion (not only adding or changing therapy) or simply by asking about QoL (i.e. focusing on the patient). The change in DLQI score between the 2 visits can be considered clinically relevant (13, 14).

We found a good correlation between DLQI and VAS (activity at present), both at the start, after 8 weeks, and when examining differences. This further supports the idea that patients' self-evaluated VAS may represent a practical outcome measure in everyday practice. It may even be hypothesized that VAS or DLQI alone can be used to evaluate treatment effects and changes in QoL in psoriasis.

Although there were only small changes in the treatment, there were significant changes in the self-reported VAS and QoL. The patients' perception of their disease at its worst also appeared to improve, possibly as a placebo effect (15). We suggest that these findings merit further studies in larger patient groups and for other diagnoses.

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The authors declare no conflicts of interest.

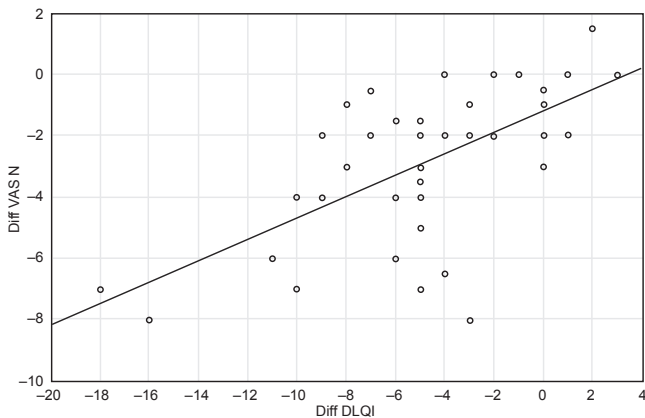


Fig. 1. Scatterplot showing the correlation of differences between the first and second visit for the values of Dermatology Life Quality Index (DLQI; Diff DLQI) and visual analogue scale (VAS; Diff VAS N),  $r = 0.63$ .

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