GRÄFLICHE KLINIKEN

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Scars after large surface thermal burns – Registration of Quality of Life and therapeutic influence of Alhydran®

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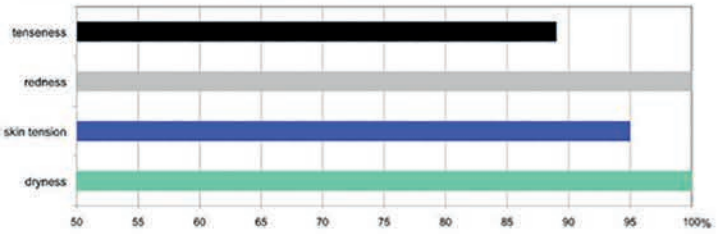
Question:
Scars, as a result of large surface thermal burns, show in comparison with normal and sound skin, serious functional deficits. These deficits can be described by means of objective, biomechanical and physiological characteristics and by the subjective observation of itching, skin tension, dryness and redness of the skin. The main goal of the study was to investigate the influence of the scarring on the Quality of Life related to the patients circumstances, and to measure this as well as the influence of skin care products in the early stage of scar maturation during the rehabilitation of the patients.

Material and Method

Material:	Patient population
number (n)	75
men / woman	54 / 21
average age (years)	51,3 ± 14,6
BMI (kg/m²)	23,9 ± 5,7
average total burn surface area (%)	23,0 ± 15,0
range accident to start inpatient rehabilitation (days)	55,1 ± 30,2
duration of treatment (days)	34,9 ± 16,1

Negative Bodyexperiences related to the burn injuries were noted in the beginning of the test in the following percentages of all patients (%)



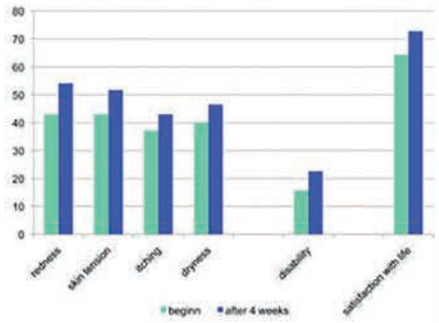
The **Pationnaire®-questionnaire** is a best-suited patient questionnaire for the interactive anamnesis and allows the objective measurement of symptoms, disabilities and well-being. The patient completes the Pationnaire questionnaire himself. It is then discussed with the physician, therapist, study attendant, supplemented and, if necessary, corrected accordingly.
The Construct Validity revealed a very high agreement between the answers to the questionnaire and the personal interviews (94% of the specimen). There was also a partial conformity (6% of the specimen) by older patients with cognitive problems. The reliability by repeated completion of the questionnaire (Test-Retest) produced good values. The Intraclass Correlation Coefficients (ICC) were over 0.7 (good) by 22 of the 33 questions.
The Pationnaire measures more complaints (up to 10 symptoms) than other questionnaires (e.g. SF 36), also specific items of burn victims with a specific module. He is not only of simple design, but also clearly defined and patient-friendly.
www.pationnaire.ch

The **SF-36v2® Health Survey** asks 36 questions to measure functional health and well-being from the patient's point of view. It is a practical, reliable, and valid measure of physical and mental health that can be completed in five to ten minutes. It's called a generic health survey because it can be used across age (18 and older), disease, and treatment group, as opposed to a disease-specific health survey which focuses on a particular condition or disease. The survey is meaningful to patients, clinicians, researchers, and administrators across the health care spectrum, and has various applications. The SF-36 provides scores for each of the eight health domains [Physical Functioning (PF), Role -Physical (RP), Bodily Pain (BP), General Health (GH), Vitality (VT), Social Functioning (SF), Role-Emotional (RE), Mental Health (MH)] and psychometrically-based physical component summary (PCS) and mental component summary (MCS) scores. www.qualitymetric.com

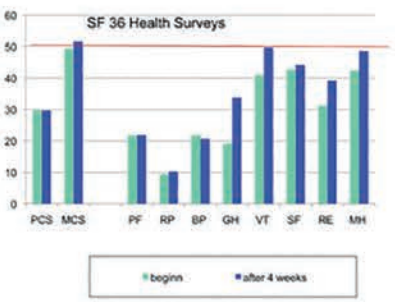
Data evaluation: The specifications have been analyzed by the program for statistical evaluation WINDOWS SPSS 13.0.

Results

The Pationnaire® showed, especially in the fields of redness (20,4%) and skin tension (16,9%) a substantial improvement compared to the initial values. Also the reduction of itching (13,5%) and dryness of the skin (13,8%), were clearly noted in the scoring of the patients. The general score on the experienced impediments of the burn scars was reduced in $^{2}/_{3}$ of the patients, and the general quality of life experience was increased with 12,6%. The use of anti-histamines in the study group of patients was reduced during the total treatment period by $^{1}/_{3}$. Side effects of the treatment with Alhydran® were not at all experienced. (left)



As could be expected, the SF-36 short-form health survey, showed for all patients and all items and in all subscales, an underscoring of the average Norm value of 50 of the standard population. The biggest underscoring in combination to this standard normation value of 50 of the SF-36 Physical Component Summary and Mental Component Summary, were found in the scales of Physical Functioning, Role-Physical and General Health. This could be expected because of the high physical functional deficits of the patients.
The physical component summary (PCS) had originally an average of 29,7 ± 6,3 which increased after 4 weeks to 21,9 ± 5,9. In the menthal component summary (MCS) the starting value was 49,3 ± 7,9 and this increased to 51,7 ± 8,0. The Physical Funtioning (PF) had in the beginning a value of 21,7 ± 9,5 and this improved to 21,9 ±7,4. The biggest improvement in the patient situation was obtained with the Role-Emotional scoring (RE), where the value increased from 19,1 ± 5,9 towards 33,8 ± 7,9. The values for burns patients however still remain below the values for healthy comparative groups.(right)



Conclusions:

1. This first use of the Pationnaire® questionnaire with a new skin module for the follow-up of burns, showed in practice stable and reliable characteristics of use in the monitoring of burn patients.
2. Alhydran® was successfully used during the early maturation of the scars, to reduce the subjective and unpleasant side effects of burn scars such as redness and skin tension, without noticeable side effects.
3. Alhydran® could trouble free be combined with (textile garments) pressure therapy. Inhomogeneous treatment groups and the missing randomization in this study, do not allow to draw conclusions beyond the observations of this study about a trend in treatment effects.
4. Further clinical, probably multi-centre studies with a larger randomized group of patients, as well as a post-study check, are needed to be able to draw statistically relevant conclusions.

Die Untersuchung fand mit freundlicher Unterstützung der Fa. BAP Medical BV statt.

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