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EVALUATION OF THE QUALITY OF LIFE OF VITILIGO PATIENTS BY THE EFFECTIVENESS OF COMBINATION THERAPY USING THE DERMATOLOGY LIFE QUALITY INDEX (DLQI)

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Abstract

Vitiligo is an important skin disease having major impact on quality of life of patients, many of whom feel distressed and stigmatized by their condition. It is important to recognize and deal with psychological components of this disease to improve their quality of life and to obtain a better treatment response.

Purpose of the study: The aim in our work was to assess the influence of vitiligo on the quality of life of patients with the help of the questionnaire of the dermatology life quality index (DLQI).

Results: In the result of treatment with UVB rays of 311 nm, the index decreased by 9 times or by 88.5%, when treating with a combined method using a tab methotrexate, the value of DLQI decreased by 91.5% or by 10%.

Conclusions: Focusing on patient's life quality is an important entity in the management of vitiligo patients; relevant supportive group-based consultations and therapies are also important arms when approaching vitiligo.

Keywords: Dermatology Life Quality Index (DLQI), vitiligo, UVB, methotrexate.

Introduction

To assess the effect of vitiligo on the quality of life of the patient, we carried out anketting with the definition of a dermatological index of quality of life (DLQI), developed in Great Britain in 1994 by A.Y. Finlay and G.K. Khan and professor N.G. Kochergin in 2001. Before the beginning of the treatment, the average value of DLQI was about 12 points, which corresponds to the strong influence of the disease on the patient's life. It should also be noted that for women the average value of the index was higher than for men. When answering questions, the majority of patients agreed with the statements that the presence of degenerated spots, especially in open areas of the body, they cause them to feel embarrassed and uncomfortable, including when communicating with the opposite sex (it was indicated as men, as well as women).

Nowadays, the relevance of this disease, at first, is associated with the significant influence of it on the psychological status and quality of life (1.2).An external cosmetical defect that attracts the attention of others. promotes the development of patients with expressed psychoemotional deviations in the form of psychological deadaptation, violation of social connections, confusion, a labile psyche (3).It has been established that the dermatology life quality index (DLQI) in case of common psoriasis vulgaris, acne vulgaris and atypical dermatitis is significantly higher than DLQI among patients with the studied pathology (4).The relevance of the problem of vitiligo today is associated with the predominant negative influence of illness on the psycho-emotional status and quality of life of the patient (1,2).The dermatological index of quality of life in vitiligo is low - 4.95, together with the DLQI in case of widespread psoriasis vulgaris (6.26) is significantly higher.Practically in all patients with vitiligo, especially in the case of a widespread form of the disease, pronounced changes are observed in relation to the environment (5).Patients with vitiligo are often forced to lead a solitary lifestyle, especially if the rash is localized in open areas of the body and on the face.The development of depigmentation in vitiligo leads to emotional and volitional disorders, which are expressed by an increase in alertness and anxiety, in a number of cases of the development of hypochondriacal ideas.Patients' behavior changes, there is a tendency to consider unequal changes on the skin, evaluate them as manifestations of a disease, developstress-dependent state, supporting the pathological process and contributing to the formation of fresh days of depigmentation (6).Vitiligo, which began at an early childhood age, leads to psychogenic trauma and further negatively affects the personal pretense.

Vitiligo is commonly misinterpreted as a cosmetic disease (7).Patients with vitiligo experience a higher level of burden (8,9), compared with healthy controls (8)., as reflected by quality-of-life (QoL) indicators. Quality-of-life impairmentmay be comparable to dermatologic (e.g., atopic dermatitis) (8,9)and non-dermatologic diseases (e.g., cancer) (10).

Material and Methods

To assess the effect of vitiligo on the quality of life of the patient, we carried out an examination of patients with the definition of a dermatological index of quality of life (DLQI),developed in Great Britain in 1994 by A.Y. Finlay and G.K. Khan and professor N.G. Kochergin in 2001. All patients were questioned before and after treatment. The questionnaire consists of 10 questions, which show a connection with various aspects of the patient's life: professional, household, sexual, social, personal. The purpose of this questionnaire is to determine the degree of influence of the disease on the patient's lifestyle. For each question, 4 variants of the answer are offered, each of which is rated from 0 to 3 points. The maximum number of points can be equal to 30, with this quality of life of the patient is inversely proportional to the total of points.
Interpretation of DLQI values:
0-1 point - no influence on the patient's life;
2-5 points - illness has an unacceptable effect on the patient's life;
6-10 points - the disease has a moderate effect on the patient's life.
11-20 points - illness has a very strong influence on the patient's life;
21-30 points - the disease has an extremely strong influence on the life of the patient.

1.	Over the past year, how much did you experience itching, tenderness, soreness, or tingling in your skin?	Very much A lot A little Not at all	☐ ☐ ☐ ☐
2.	Over the past year, how embarrassing and uncomfortable have you felt about your skin condition?	Very much A lot A little Not at all	☐ ☐ ☐
3.	Over the past year, how badly did your skin condition interfere with your shopping, housekeeping or gardening?	Very much A lot A little Not at all	☐ ☐ ☐
4.	Over the past year, how much has your skin condition influenced the choice of clothing you wear?	Very much A lot A little Not at all	☐ ☐ ☐

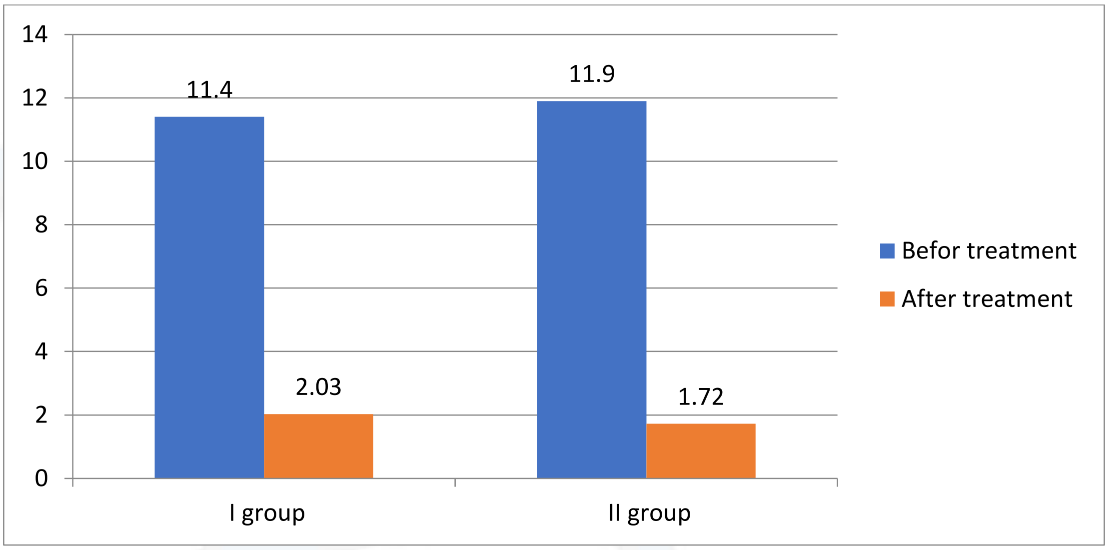
5.	Over the past year, how A lotly has your skin condition affected your social, activity or leisure time?	Very much A lot A little Not at all	☐ ☐ ☐
6.	Over the past year, how much has your skin condition spun your sports activities?	Very much A lot A little Not at all	☐ ☐ ☐
7.	Has your skin condition interfered with your presence at work or education over the past year?	Yes Not	☐
	If no, to what extent has your skin condition been a problem for your work or training?	A lot A little Not at all	☐ ☐ ☐
8.	Over the past year, how badly has your skin condition caused problems with your partner or your close friends or relatives?	Very much A lot A little Not at all	☐ ☐ ☐ ☐
9.	Over the past year, how badly has your skin condition been at the root of your sexual problems?	Very much A lot A little Not at all	☐ ☐ ☐ ☐
10.	Over the past year, how much has the treatment of your skin condition created difficulties for you, for example, created a mess in the house or is it the right time?	Very much A lot A little Not at all	☐ ☐ ☐ ☐

Dermatology Life Quality Index (DLQI) for patients with dermatological diseases. The dermatology life quality index can be used not only as a criterion for assessing the severity of the patient's condition, but also as a criterion for the effectiveness of the therapy.A decrease in the index in the course of treatment means an improvement in the quality of life of the patient.

Results

When studying the dermatology life quality index in patients before and after treatment, that in the studied patients in the first (n = 30) and second groups (n = 30) before the treatment, the mean DLQI value was 11.4 ± 2.07 and 11.9 ± 2.03 points, which according to the assessment scale corresponds to the strong influence of disease on the life of the patient. After the applied methods of combination therapy in the first group, the average value of the index decreased to 2.03 ± 0.15 points, and secondly to 1.72 ± 0.27, which is a sign of better life.When comparing the indicators before and after treatment, statistically significant differences between them were revealed (11.4 ± 2.07 versus 2.03 ± 0.15 and 11.9 ± 2.03 versus 1.72 ± 0.27p <0.05).

DLQI indicators before and after treatment



Comparison of the index before and after treatment in both groups also revealed a statistically reliable difference between these indicators (p <0.05). In the result of treatment with UVB rays of 311 nm, the index decreased by 9 times or by 88.5%, when treating with a combined method using a tab methotrexate, the value of DLQI decreased by 91.5% or by 10%. In this way, in the result of therapy in both groups, a significant decrease in the index was observed, i.e. the patients felt themselves more comfortable and confident. Despite the fact that the average value of DLQI in both groups statistically did not differ between men and women, it should be noted that women were among the most important among men.

This is due to the fact that women are more susceptible to suffering from illness. Answer questions with a larger number of patients agreed with the statements that the clinical manifestations of vitiligo, especially in open areas of the body make them feel embarrassment and confusion, especially when communicating with the opposite sex, this was indicated as both men and women. Because of the presence of white patches in open areas of the skin, both men and women paid more attention to the choice of clothes, and more time was devoted to treatment. In this way, the obtained results of treatment in the form of clinical cure and significant improvement were confirmed positively dynamics of the index of the dermatology life quality index before and after the end of the photo therapy in all patients. Such dynamics of indicators was found in full compliance with the dynamics of regression of clinical manifestations in patients.

Discussion:

In the past decade, interest in and publication of the overall and psychosocial QoL of patients with vitiligo haveincreased tremendously, highlighting the QoL burden in vitiligo. Several recent studies have reported meta-analyses of depression and/or anxiety in patients with vitiligo(11-13), with less focus on other psychosocial comorbidities experienced by patients with vitiligo.

Some of the factors significantly associated with a higher psychosocial burden have been associated with a greater willingness to pay, although the association between willingness to pay and lesion location was not assessed (14). In many cases, studies reported findings using broad QoL instruments that are not specific to vitiligo. Generic QoL instruments may not reflect the true burden of vitiligo, in part because of instrument design. For example, the DLQI includes an item for physical symptoms (i.e., itch, soreness, pain, or stinging) (15), which tend to be more pronounced in patients with atopic dermatitis or psoriasis, possibly leading to an underestimation of burden in vitiligovs other dermatologic diseases (16,17). In addition, the heterogeneity of studies included in this review may further complicate direct comparisons of general QoL in vitiligo with other dermatologic diseases.

Catucci et al. translated VitiQoL to Brazilian Portuguese (VitiQoL-PB) and performed cultural adaptation and validation (18). in the original VitiQoL, one of the limitations of the study was no assessment of test-retest reliability. In Catucci study, 16 subjects (21 % of the sample) completed the VitiQoL-PB for the second time, confirming the high test-retest reliability with an intraclass0.86 to 0.98) (18). In our study 25 patients in pilot stepwere completed Persian version twice by 14–21 days interval. The reliability of the Persian version was confirmed by Cronbachalfa (0.956), which was similar to original VitiQoLCronbach'salpha (0.935) [4] and Brazilian Portuguese study (Cronbach alpha = 0.944) (18). Correlations between self-reported severity and VitiQoL scores (convergent validity) in Persian version ($p < 0.05$, $r = 0.463$) was near to correlation coefficient of the primary study (19)($p < 0.05$, $r = 0.51$) and Brazilian Portuguese one (18).

Conclusion:

The task in our work was to assess the influence of vitiligo on the quality of life of patients with the help of the questionnaire of the dermatology life quality index (DLQI). Focusing on patient's life quality is an important entity in the management of vitiligo patients; relevant supportive group-based consultations and therapies are also important arms when approaching vitiligo.

Before the treatment, the mean value of DLQI was 11.4 ± 2.07 and 11.9 ± 2.03 points in both groups, which, according to the rating scale, corresponds to a strong negative life-giving effect. As a result of the conducted treatment in both groups, a positive dynamics was observed in the indicator of the level of the dermatological index of quality of life. When comparing the indices before and after treatment, statistically significant differences between them were revealed (11.4 ± 2.07 versus 2.03 ± 0.15 and 11.9 ± 2.03 versus 1.8 ± 0.27 $p <0.05$). When treating with a combined method with the use of a tab methotrexate, the DLQI value decreased 10 times or by 91.5%. Such dynamics of indicators was found in full compliance with the dynamics of regeneration of clinical manifestations in patients. Objective data and a survey of patients showed the advantage of a combined therapy, which made it possible to significantly reduce the total dose of radiation what is of importance for the remote side effects.

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