

Health Related Quality Of Life In Patients With Vitiligo

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Abstract

Vitiligo is a chronic pigmentary skin disease. Vitiligo patients suffer from low self-esteem and poor body image which may cause a lower level of quality of life. **The aim of this study** was to assess the impairment of quality of life in adults with vitiligo compared with unaffected controls. **Subjects and Methods:** A case-control study was conducted at Benha University Hospital, Benha City, Qalubia governorate; Egypt. The study group comprised 95 cases with vitiligo and 100 unaffected controls. All participants were interviewed using the Dermatology Life Quality Index (DLQI) questionnaire. **Results:** The total mean DLQI score in vitiligo was 12.3, compared with 3.02 in healthy controls ($p < 0.001$). In vitiligo, females experienced a greater impact on Quality of Life than males. **Conclusion and Recommendations:** patients with vitiligo are prone to have a lower level of quality of life, so management should contain both medical treatment and psychological interventions.

Key words: vitiligo; quality of life; adult, Benha.

Introduction

Vitiligo is a chronic pigmentary skin disease with a worldwide prevalence of 1-4%. The highest age-specific prevalence of vitiligo was seen among people 20-30 years old⁽¹⁾. Vitiligo does not cause notable physical impairment, but can have a negative impact on one's Quality of Life (QoL), well-being and self-esteem by predisposing subjects to social isolation, depression, and problems with sexual relationships and the likelihood of marriage⁽²⁾. People with dark skin colour are more stigmatized⁽³⁾. WHO has defined QoL as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns"⁽⁴⁾.

Health related quality of life (HRQL) is defined as the functional effects of an illness and its consequent therapy upon a patient, as perceived by the patient⁽⁵⁾.

For patients with chronic skin diseases, QoL can be as simple as wearing a pair of shorts or tank top without feeling ashamed⁽⁶⁾. One way of evaluating the burden of a disease is by measuring the health-related quality of life (HRQL), using standardized questionnaires to measure the impact of a disease on the physical, psychological, social functioning, and the wellbeing of the patient⁽³⁾.

Regarding dermatological disorders, Dermatology Life Quality Index (DLQI) is used to assess HRQL, it has High validity, reliability, and consistency,

Short and practical for efficient use, its brevity may not fully address the emotional impact of the skin condition ⁽⁶⁾.

Although the DLQI was created in the United Kingdom, it has been used in at least 20 countries and it is currently being used in several others. The DLQI has been used in over 36 different skin conditions. It has been most widely used in psoriasis (30 studies), atopic eczema (21 studies), acne (10 studies), vitiligo (five studies) and chronic urticaria (four studies) ⁽⁷⁾.

Objective of the work:

The objective of this study is to assess the QoL in patients with vitiligo using the Dermatology Life Quality Index (DLQI).

Subjects and Methods

▪ Study design:

This case-control study was conducted at Benha University Hospital, Benha City, Qalubia governorate, Egypt, in the period from June 2014 to October 2014, study group comprised of 95 vitiligo cases attending either dermatology department or outpatient clinic (which represents all cases who accept to share in this work), and they were compared with control group of 100 healthy persons from workers in Benha Faculty of Medicine and Benha University Hospital. Inclusion criteria was patients aged above 16 years old, while patients below this age and having any other dermatological diseases were excluded from this study.

▪ Ethical consideration:

An approval from the Research Ethics Committee in Benha Faculty of Medicine was obtained to conduct this work. A written informed consent (in

Arabic language) was obtained before participation. It included all details about the study (title, objectives, methods, expected benefits and risks and confidentiality of data).

▪ Data collection:

All participants were interviewed and examined by face to face interview with the help of the physicians in dermatology department. Data were collected using The Dermatology Life Quality Index (DLQI) questionnaire (Arabic version) which was proposed by Finlay et al .in 1994 ⁽⁸⁾ and translated in many languages later on. The questions were classified into six headings items: (Q1–2 symptoms and feelings, Q3–4 daily activities, Q5–6 leisure, Q7 work/school, Q8–9 personal relationships, Q10 treatment) and were answered in the DLQI questionnaire in a short time on a 4-point scale (0–3). The sum of the scores ranged from 0 to 30. The higher the score, the more quality of life is impaired. The meaning of the sum of DLQI Scores are 0-1 = no effect at all on patient's life, 2-5 = small effect on patient's life, 6-10 = moderate effect on patient's life, 11-20 = very large effect on patient's life and 21-30 = extremely large effect on patient's life ⁽⁹⁾.

Statistical analysis: Using the computer program SPSS (Statistical Package for Social Science) version 20; quantitative data were expressed as mean, standard deviation (SD), median and Interquartile Range (IQR), while qualitative data were expressed as number and percent, Student's *t*-test was used to compare between mean of two groups of numerical (parametric) data, for continuous non-parametric data, Mann-Whitney *U*- test was used, Inter-group comparison of qualitative data was performed by using chi square test (X^2 -value), P value <0.05 was considered statistically significant.

Results

The study group comprised 95 subjects with vitiligo (59 female, 36 male; 69 from urban areas, 26 from rural areas; mean age was 37.7 ± 11.2 years) and 100 unaffected controls (53 females, 47 males; 67 from urban areas, 33 from rural areas; mean age was 36.8 ± 13.6 years) (Table 1).

The mean score of DLQI in vitiligo patients was 12.3 ± 6.1 , which is statistically significantly higher than the mean score of healthy controls (3.02 ± 3.3) ($p < 0.001$) (Table 2).

Based on the interpretation of the results of the DLQI scale, no impairment in QoL was found in 1 (1.1%) and in 47 (47%), small impairment was found in 13 (13.7%) and in 32 (32%), moderate impairment was found in 37 (38.9%) and in 17 (17%), very large impairment was found in 40 (42.1%) and in 4 (4%), an extremely large impairment in 4 (4.2%) and 0 (0%) of vitiligo cases and control group respectively (Table 3).

Vitiligo has a highly significant impact on patients' QoL on the scale of symptoms and feelings, daily activities, leisure, work and school, personal relationships and treatment ($p < 0.001$) compared with healthy control (Table 4).

As regards sex difference in the results of the DLQI scale, no and small impairment in QoL was found in 4 (6.8%) and in 10 (27.8%), moderate impairment was found in 28 (47.5%) and in 9 (25%), very and extremely large impairment was found in 27 (45.7%) and in 17 (47.2%) in females and males respectively ($p < 0.05$) (Table 5).

Discussion

Vitiligo is a chronic pigmentary disorder of the skin. Although it is not a life threatening disease, but it may considerably influence the psychological well-being of patients. It has been suggested that vitiligo patients suffer from low self-esteem, poor body image, and poor quality of life (QOL)⁽¹⁰⁾.

Our study demonstrated that the total mean DLQI score in vitiligo patients (11.7 ± 6.1) was statistically significantly higher than that in control group (3.1 ± 3.3) and this is in agreement with Karelson et al.,⁽¹¹⁾ who stated that the DLQI was also significantly higher in vitiligo than in healthy controls and also with many studies from other regions of the world which have shown higher mean DLQI scores in vitiligo: 5.9 in Japan⁽¹²⁾, 7.0 in Germany⁽¹³⁾, 7.1 to 8.2 in Iran^(14, 15), 7.2 in France⁽¹⁶⁾, 8.4 in China⁽²⁾, 10.7 in India⁽¹⁷⁾, and 14.7 and 17.1 in Saudi Arabia^(18, 19).

Cases with vitiligo were affected on every individual DLQI item compared with healthy controls, but to a greater extent in terms of symptoms and feelings, and daily activities which is in agreement with Ongene et al.⁽²⁰⁾ and Wang et al.⁽²⁾ and partially agreed with Karelson et al.,⁽¹¹⁾ who found that symptoms and feelings and leisure are more affected and stated that Vitiligo has no impact on activities such as going to school or work which disagree with our study which revealed that it had an effect on them. This confirms that vitiligo causes little or no direct physical impairment, it is often considered just as a cosmetic problem. However, the change in appearance caused by this skin disorder can affect a person's emotional and psychological well-being and have

major consequences on life. Moreover, vitiligo is a long-lasting disease, and its unpredictable natural course causes a heavy burden on patients' QoL.

In our vitiligo cases, females showed more affection of QoL than males, this is in agreement with many other studies which had reported lower QoL in women with vitiligo ^(11, 19, 21, 22) and this disagrees with results reported by Zandi et al ⁽¹⁾ and Mishra et al ⁽²³⁾ who stated that there was no statistically significant difference seen in DLQI between women and men. The larger impact on quality of life in female patients may be due to that they are more emotional and sensitive about their appearance and the potential impact on their marital status.

Conclusion and Recommendations:

This study demonstrated that patients with vitiligo prone to have a lower level of quality of life which could interfere with their therapeutic outcome. Females had poorer quality of life than males. Management should focus on medical treatment as well as psychological support, hence better QoL and treatment outcomes could be achieved.

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Table (1): comparison between two study groups as regards age and sex:

		Cases (N=95)	Control (N=100)	p-value
Age (mean \pm SD)		37.7 \pm 11.2	36.8 \pm 13.6	>0.05
Sex No. (%)	Male	36(37.9)	47(47)	>0.05
	Female	59(61.1)	53(53)	
Residence No. (%)	Urban	69(72.6)	67(67)	>0.05
	Rural	26(27.4)	33(33)	

Table (2): Comparison between cases and control as regards the total mean DLQI score:

Cases		Control		p-value
Mean	SD	Mean	SD	
11.7	6.1	3.1	3.3	<0.001*

*statistically significant

Table (3): Comparison between cases and control as regards Dermatology Life Quality Index (DLQI):

	Cases (N=95)		Control (N=100)		p-value
	No.	%	No.	%	
No effect at all on patient's life	1	1.1	47	47	<0.001*
Small effect on patient's life	13	13.7	32	32	
Moderate effect on patient's life	37	38.9	17	17	
Very large effect on patient's life	40	42.1	4	4	
Extremely large effect on patient's life	4	4.2	0	0	

*statistically significant

Table (4): Comparison between cases and control as regards mean scores for Dermatology Life Quality Index (DLQI) items

	Cases	Control	p-value
	Median (IQR [‡])	Median (IQR)	
Symptoms and feelings	3 (2-4)	1(1-2)	<0.001*
Daily activities	2 (0-3)	0 (0-0)	<0.001*
Leisure	1 (0-2)	0 (0-0)	<0.001*
Work and School	0 (0-2)	0 (0-0)	<0.001*
Personal relationships	1.5 (0-3)	0 (0-1)	<0.001*
Treatment	2 (1-3)	0 (0-1.75)	<0.001*

[‡]Interquartile Range

*statistically significant

Table (5): Comparison between male and female cases as regards Dermatology Life Quality Index (DLQI):

	Female (N=59)		Male (N=36)		p-value
	No.	%	No.	%	
No and Small effect on patient's life	4	6.8	10	27.8	<0.05*
Moderate effect on patient's life	28	47.5	10	27.8	
Very and Extremely large effect on patient's life	27	45.7	16	44.4	

*statistically significant