

Original Research Article

Dermatology life quality index in psoriasis patients attending a tertiary care hospital: a study from North India

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ABSTRACT

Background: Psoriasis affects nearly 1% of the world population. It can be a source of significant morbidity and psychological stress to the patient but is not lethal under ordinary circumstances. Patients suffering from the disease feel a lack of empathy on part of care-givers, family members, healthcare professionals as well as society in general. Dermatology life quality index (DLQI) is a questionnaire-based assessment of health related quality of life in patients suffering from skin disorders and has been seen to correlate well with the impact of the disease on a patient. This study was done to understand the impact of psoriasis on the overall well-being of patients using DLQI as the tool of assessment.

Methods: The study included 40 cases of psoriasis that were assessed for the severity of the disease based on percentage body surface area involvement. The impact of disease severity and other factors on the quality of life of the patient was assessed using DLQI.

Results: Out of 35 patients with BSA involvement <50% (mild and moderate disease), 28.6% (n=10/35) showed a very large or extremely large effect on the quality of life while no patient with a BSA involvement >50% (severe and very severe disease) reported the same. A small, moderate or no effect on the DLQI was seen in 71.4% (n=25/35) of cases from the mild and moderate disease group while 100% (n=5/5) of cases from severe and very severe disease group reported a similar effect. Thus, DLQI was not directly related to the extent of BSA involvement and was dependent on other factors as well.

Conclusion: Age had a correlation with the effect of the disease on the quality of life of psoriasis cases. Patients who were younger were more likely to report stress and anxiety related to the recurrences seen with the disease. Patients with lesions on sites that are socially exposed like face, hands, scalp, etc. were more likely to feel embarrassed about their condition. Younger age, female gender, lesions on exposed sites and recently diagnosed patients (<12 months) were factors which had a significant impact on the health-related quality of life of patients. The severity of disease and extent of involvement were not always directly related to extent of impact on the quality of life.

Keywords: Dermatology life quality index, Health related quality of life, India, Morbidity, Psoriasis

INTRODUCTION

Psoriasis is a common, chronic inflammatory skin disorder which affects roughly 1% of world population.¹ Although not a life-threatening condition under ordinary circumstances, psoriasis can have a significant negative impact on the psychology of the patient. The social, economic and financial implications of the disease are often underestimated by healthcare professionals, government as well as general public. This might be due to the fact that our society assigns more value to the physical sequelae of a disorder and a disease which does not grossly impair a person's capability to live a healthy life and is not per-se lethal, does not entice much sympathy. Patients suffering from psoriasis believe that the overall impact of the disease is grossly underrated and feel a lack of empathy from people in general and caregivers in particular.²

The spectrum of psoriasis ranges from mild disease with a few plaques and minimal itching to severely incapacitating psoriatic arthritis and patients having skin failure secondary to erythroderma. The level of impact on daily activities is directly correlated with the severity of itching, pain, location and extent of lesions.³ Lesions which are extensive and located on socially visible sites like face, hands, etc. are more likely to cause cosmetic concerns amongst patients resulting in problems like anxiety, depression, low self-esteem and in severe cases suicide.⁴

The severity of psoriasis is traditionally assessed using psoriasis area severity index (PASI) scoring which is based on the grading of erythema, scaling, induration and extent of body surface area involved.⁵ PASI and other similar scoring systems, however, do not assess the impact of the disease on an individual. A few lesions on the hands may not greatly impair the life of a labourer but may have a significant impact on an individual working as a model or in the show business. Thus, lesions of similar extent and severity may have different impact on the occupational, behavioral and psychological health of different individuals. Consequently, appraisal of impact of the disease on quality of life of a patient holds a paramount importance in the overall assessment and care of the patient.

Dermatology life quality index (DLQI) has been shown in many studies to correlate well with the impact of psoriasis on the health related quality of life of a patient.^{6,7} It is a questionnaire containing ten questions covering various aspects like symptoms of itching, pain, embarrassment related to the skin condition, interference with routine, leisure, social and sexual activities, and problems related to treatment. DLQI in patients suffering from psoriasis has not been comprehensively studied in Indian subcontinent. This study was conducted to assess the impact of psoriasis on the quality of life of patients using the DLQI.

METHOD

This study was a cross sectional study conducted in the out-patient department of dermatology in a tertiary care center in Kashmir during the month of July in 2019. Forty patients diagnosed with psoriasis were included in the study after explaining its purview and obtaining an informed consent.

Inclusion criteria: All patients suffering from psoriasis of any severity for duration greater than 6 months were included in the study.

Exclusion criteria: Patients less than 12 years of age and those suffering from other cutaneous or systemic illnesses which could impact the health-related quality of life, were excluded.

The demographic data of the cases was recorded on specially designed proformas. A detailed history and clinical examination was performed in all patients. DLQI was recorded by the researcher on separate sheets. The questionnaire comprises ten questions, each of which are scored on a four-point scale as follows; very much=3, a lot=2, a little=1, not at all=0. Out of the ten questions, question numbers 3 to 10 also have an option of 'not-relevant' which is also scored as zero. Question number 7, which relates to work and study, has two parts. A score of 3 is given for 'yes' in response to this question while a response of 'no' or 'not relevant' is scored as 0. The maximum score possible is 30 which indicate the poorest quality of life while the minimum score of 0 indicates a good quality of life.⁸ The interpretation of the scores is done as follows:

1. 0-1: No effect at all on patient's life.
2. 2-5: small effect on patient's life.
3. 6-10: moderate effect on patient's life.
4. 11-20: very large effect on patient's life.
5. 21-30: extremely large effect on patient's life.

Assessment of severity of the disease was done based on percentage of body surface area (BSA) involvement as follows: 0-25% BSA=mild, 26-50% BSA=moderate, and >50% BSA=severe. The percentage of BSA involved was determined using palm surface area assessment.⁹

The data was tabulated in the form of a master chart and presented in the form of frequency and percentage for categorical variables.

RESULT

The study included total 40 patients whose demographics are presented in (Table 1). The categorization of patients as per their DLQI is presented in (Table 2). Majority of patients (40%) were found to be in the moderately affected group. The assessment of severity based on BSA involvement is tabulated in (Table 3). A comparison

between the severity of the disease and DLQI was made and the same is presented in (Table 4).

Table 1: Demographics of patients.

Demographic	Groups	No.	Percentage
Age group (years)	12-20	5	12.5
	21-30	4	10
	31-40	12	30
	41-50	11	27.5
	51-60	8	20
Gender	Male	22	55
	Female	18	45
Occupation	Labourer	12	30
	Shopkeeper	6	15
	Govt. employee	4	10
	Housewife	10	25
	Student	8	20
	Socio-economic	Lower	20
Middle		18	45
Upper		2	5

Out of 35 patients with BSA involvement <50% (mild and moderate disease), 28.6% (n=10/35) showed a very large or extremely large effect on the quality of life while no patient with a BSA involvement >50% (severe and

very severe disease) reported the same. A small, moderate or no effect on the DLQI was seen in 71.4% (n=25/35) of cases from the mild and moderate disease group while 100% (n=5/5) of cases from severe and very severe disease group reported a similar effect. Thus, DLQI was not directly related to the extent of BSA involvement and was dependent on other factors as well.

Table 2: Categorization of patients as per DLQI.

DLQI score	Interpretation	No.	Percentage
0-1	No effect	4	10
2-5	Small effect	10	25
6-10	Moderate effect	16	40
11-20	Very large effect	8	20
21-30	Extremely large effect	2	5

Table 3: Assessment of severity based of body surface area involvement.

BSA %	Interpretation	No.	Percentage
0-25	Mild	22	5
26-50	Moderate	13	32.5
50-75	Severe	3	7.5
>75	Very severe	2	5

Table 4: Comparison between disease severity and dermatology quality of life index.

Effect on DLQI						
Disease severity	No effect	Mild	Moderate	Severe	Very severe	Total
Mild	3	8	8	2	1	22
Moderate	1	1	4	6	1	13
Severe	0	1	2	0	0	3
Very severe	0	0	2	0	0	2
Total	4	10	16	8	2	40

DISCUSSION

The study shows that psoriasis can have a significant impact on the health-related quality of life of patients suffering from the disease. The severity of this impact is related to a number of factors and not just the severity or extent of the disease as indicated in some previous studies.^{10,11} We found that the impact on quality of life as assessed by DLQI was not always directly proportional to the severity of disease or BSA involved. At times, patients with mild to moderate disease reported significant impairment of quality of life while those with severe to very severe disease would at times report minimal impairment. It seemed as if some of the patients with severe disease had come to terms with the disorder and had accepted it and learnt to live with it. On the contrary, some of the patients with milder forms of the disease reported a significant psychological impact leading to social handicap and a decrease in quality of life

which was out of proportion to the severity of the disease. These findings were in contrast to those reported previously in literature^{10,11} though a few studies report that the correlation between disease severity and quality of life is moderate at best.³

Age had a correlation with the effect of the disease on the quality of life of psoriasis cases. Patients who were younger were more likely to get disheartened with the disease and reported stress and anxiety related to the recurrences seen with the disease. Younger patients were also more likely to demand aggressive treatment modalities even when the objective evaluation of their disease didn't favour such an approach. This was consistent with the findings reported in other studies.^{10,12}

Patients with a shorter duration of the disease, i.e. those who had been recently diagnosed with psoriasis (<12 months), found it difficult to come to terms with the

disease. The same was evidenced in the higher impairment of DLQI in these patients as compared to those who had been suffering from the disease for a longer duration. Similarly, females were found to be more concerned regarding the cosmetic impact of the disease as compared to male counterparts even when the objective evidence of disease severity was not present. Both these findings were consistent with those reported previously in a study.¹⁰ These points have important therapeutic implications as these young patients, especially females, are not good candidates for systemic agents like methotrexate and retinoids both of which are teratogenic and methotrexate has additional injurious effects on fertility.^{13,14}

The sites of involvement also had an association with the DLQI. Patients with lesions on sites that are socially exposed like face, hands, scalp, etc were more likely to feel embarrassed about their condition. Cases with lesions involving the upper limbs or lower limbs often reported a great dislike and apprehension in wearing half sleeves shirts or shorts. They preferred to cover as much part of their limbs as possible without catching undue attention.

Psoriasis is a debilitating disorder affecting all aspects of a patient's life, whether physical, social, psychological, sexual, economic or vocational. The approach to the disorder should be multi-dimensional and all aspects of the disease should be taken into consideration while formulating a treatment plan. A disease that appears mild to the treating physician may have devastating psychological effects on the psyche of the patient and should be taken into consideration. A passionate approach with empathy towards the patient, listening to the patient and addressing all his concerns regarding the disease and its treatment can go a long way in improving the quality of life of the patient.

The main limitation of our study was a small sample size which may not be an adequate representation of the entire population. Further large-scale studies may help in confirming our findings.

CONCLUSION

This study showed that psoriasis has a significant impact on the health-related quality of life of patients as determined by the DLQI. Younger age, female gender, lesions on exposed sites and recently diagnosed patients (<12 months) were factors which had a significant impact on the health-related quality of life of patients. The severity of disease and extent of involvement were not always directly related to extent of impact on the quality of life.

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