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Original Research Article

Quality of life, stress and depression in young adult with psoriasis – A cross sectional study

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Abstract

Background: Psoriasis is a chronic, relapsing, inflammatory, immune-mediated cutaneous condition. Quality of life is largely affected in patients with psoriasis because of its visibility, cosmetic disfigurement, and social stigma, especially in young adults. There are several studies on the inter-relationship of psoriasis, quality of life, stress, and depression, but only a few of these are in the younger population. This study attempted to bridge this gap in knowledge.

Materials and Methods: A cross-sectional analytical study was conducted to assess the relationship between quality of life using Dermatology life quality index (DLQI), level of stress using psoriasis life stress inventory (PLSI) and depression using Primary care Screening Questionnaire For Depression (PSQ4D) among patients with psoriasis for a duration of at least three months in the age group of 18-35 years.

Results: Seventy patients were included in the study. Forty-five (64.3%) reported having stress. Forty-seven (67.1%) patients had moderate to severe reduction in quality of life. Thirty-two patients (45.7%) had a PSQ4D score of 2 or more indicating depression. Depression had a positive correlation with the severity of psoriasis (r = 0.025). There was a significant association between moderate to severe reduction in quality of life with systemic co-morbidities (p= 0.046) and stress (p=0.002, r = 0.232).

Conclusion: In this study, we found that about 50% of young patients with psoriasis irrespective of gender had a poor quality of life, associated stress, and depression. Treatment of psoriasis entail providing psychosocial support to the patients, besides drugs.

Keywords: Psoriasis, Quality of life, Stress, Depression.

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1. Introduction

Psoriasis is a chronic, relapsing, inflammatory, immune-mediated disease, affecting approximately 1.5 to 3% of the population.[1] Many cases of psoriasis begin in childhood or adolescence. Quality of life is affected in patients with psoriasis because of the stigma of visible skin lesions.[2] World Health Organization defined the quality of life as ‘‘the individuals' perception of their position in life, in the context of the cultural and value systems in which they live and in relation to their goals, expectations, standards and concerns." This description implies the importance of subjective experience in the quality of life, over and above the observation of healthcare workers. In clinical practice, quality of life assessed subjectively often does not match with the severity assessed clinically. Patients with a comparable severity of diseases usually have different opinions about their quality of life. Therefore, instead of observant evaluation, self-reporting assessment becomes the mainstay method to measure quality of life. Active disease at a young age has an added impact on the quality of life, as it could affect the completion of education and joining a profession.[4]

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Stress has been a proven factor that can exacerbate psoriasis.[3] Concerns about appearance can result in reduced self-esteem, embarrassment, guilt, suicidal ideation, sexual problems, and employment problems.[5]

It is important to determine the impact of psoriasis on the quality of life, stress, and depression in young adults. There are several studies on the inter-relationship of psoriasis, quality of life, stress, and depression, but only a few of these are in the younger population.[6] This study attempted to bridge this gap in knowledge.

2. Materials and Methods

This was a cross-sectional analytical study to assess the relationship between quality of life (assessed using Dermatology life quality index (DLQI)), level of stress (assessed using psoriasis life stress inventory (PLSI)) and depression (assessed using Primary care Screening Questionnaire For Depression (PSQ4D)) among patients in the age group of 18-35 years, attending dermatology department of a tertiary care hospital, who had psoriasis for a duration of at least three months. Those who refused to give consent, who were illiterate or otherwise unable to comprehend or respond to the questionnaire, and those known to have psychiatric illness were excluded. Written and signed informed consent was taken from all the subjects.

According to the study by Espostio et al, the prevalence of depression among patients with psoriasis (p) was 62%.[5] Considering d (allowable error) as 20% of p and applying these in the formula: n=4pq/d2, the sample was calculated as 70.

The demographic profile and clinical details of the subjects were noted in a proforma. The severity of psoriasis was assessed by estimating the body surface area of involvement and psoriasis area severity index (PASI). All the questionnaires were translated into the local language (Malayalam). They were translated back to English and were pilot-tested in ten patients for validation. Necessary corrections and modifications were made. The responses of the participants to the questionnaires assessing PLSI, PSQ4D and DLQI were recorded. The study had the approval of the institutional review board. Statistical analysis was done using Epi info software.

3. Results

Seventy patients were included in the study. The age ranged from 18-35 years (mean = 28.23 ± 5.35 years). The majority (n=46, 65.7%) of the study population were males. (M:F = 1.9:1). Skin lesions in 62 (88.6%) patients were non-pruritic. Sixty-two (88.6%) patients had no medical comorbidities. Eight (11.4%) patients were diabetic and one each (1.4% each) had hypertension and dyslipidemia. The majority (n=57; 81.4%) of the patients did not have a family history of psoriasis. Around 18.6 % (n=13) of the patients were smokers and 27.1 % (n=19) used to consume alcohol. Twenty-five (35.7%) patients were graduates; thirty-six (51.4%) had studied up to the 10th standard. Twenty-seven (38.6%) patients were skilled workers. The commonest morphological type of psoriasis was chronic plaque psoriasis (n= 68; 97.1%). Fifty-four (77.1%) patients had PASI score less than 10. Only one patient had a PASI of more than 30.

(**Figure 1**) The median PASI score was 7.45. A majority (n=25, 35.7%) of the patients had BSA involvement less than 10. Fifteen (21.4%) patients had BSA involvement more than 30. Out of 70 patients, 45(64.3%) had stress. Forty-seven (67.1%) patients had moderate to severe reduction in quality of life. Twenty-three (32.9 %) patients had no small effect on the quality of life. Thirty-two (45.7%) patients had a PSQ4D score of 2 or more indicating depression. Depression had a positive correlation with the severity of psoriasis (r = 0.025). There was a significant association between moderate to severe reduction in quality of life with systemic co-morbidities (p= 0.046) and stress (p=0.002, r = 0.232). (**Table 1&2**)

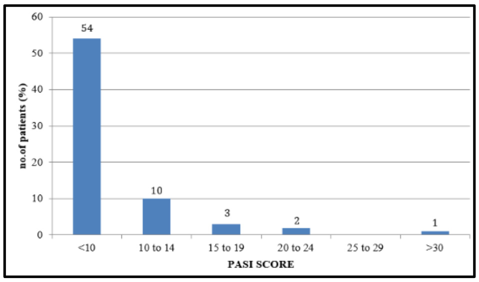

Figure 1: PASI score of the study population

Fifty-four patients (77.1%) had PASI score less than 10. Only one patient had PASI more than 30.

Table 1: Association between stress and quality of life

DLQI score	**PLSI score**		**χ2 value**	**p value**
	<10 (no stress)	**10 or more (stress)**		
0 to 5 (no to small effect at all on patient's life)	14	9	9.441	**0.002**
6 to 30 (moderate to extremely large effect on patient's life)	11	36		
Total	25	45		

36 patients with stress had a moderate effect on quality of life also. DLQI and PLSI showed positive association with p value 0.002 and x2 value 9.441.

Table 2: Association between quality of life and systemic comorbidities

Comorbidities	Number of patients with DLQI 0 -5	Number of patients with DLQI 6 -30	χ2 value	p value
Absent	23	39	4.420	**0.046**
Present	0	8		
Total	23	47		

DLQI score showed a positive association with comorbidities (p value 0.046 and x^2 value 4.420).

4. Discussion

Psoriasis during early adulthood can have an added impact on the quality of life due to the psychosocial challenges it could pose in completing education and entering a job. The patient's psychological distress may not correlate with the severity of the disease and the treatment does not modify either the distress or the opinion of the patients opinion about their skin condition.[7] Patients with psoriasis are more prone to develop psychiatric disorders than those with other skin diseases.[8]

In this study, 70 young patients with psoriasis were enrolled. The age group ranged from 18-35 years of which the mean age was 28.23 ± 5.35 years. There is no conclusive data regarding prevalence of psoriasis among young adults in India. Among 70 patients, 46(66%) were males and 24(34%) were females. The male to female ratio in our study revealed a slightly higher incidence in men than in women at 1.9: 1, which was similar to a study by Ejaz et al.[9] WHO reported a male to female ratio of 1.2:1. This observation may be because males seek medical help earlier. Although few studies have reported no significant difference in the frequency of psoriasis between genders.[10,11] There are some studies that showed a higher incidence in women than in men.[12] Tobacco use and alcohol consumption were not associated with quality of life, stress and depression in our study while previous reports suggest alcohol and tobacco use both exacerbate the psoriasis progression, can affect quality of life, depression, and anxiety.[13,14] Alcohol and tobacco use strongly relied on questionnaire-based assessments and were subjected to recall bias. Selection bias in the study population might exist as well since the patients are inclined to quit tobacco use and alcohol. Another possible reason is the intake amount we used to define the habitual behaviours was not strong enough to pose an impact on quality of life. Sixty-two (88.6%) patients had no medical comorbidities. Eight (11.4%) patients were diabetic and one each (1.4% each) had hypertension and dyslipidaemia. Comorbidities are more common in elderly population than younger. A study by Luca et al reported 44.1% (n=45) of patients with comorbidities.[15] Our study included patients from younger age group, hence a low number of patients with comorbidities. Thirteen (18.6%) patients had a family history of psoriasis. Duruöz et al showed family history of psoriasis in 36%,[16] whereas a nationwide survey from China showed that, 23.1% had a positive family history of psoriasis.[17]

Around 77% (n=54) in our study had PASI less than 10 and only one patient had PASI more than 30.

The mean PASI in our study was 7.45 ± 6.05, which was similar to a study by nayak et al.[18] Maari et al reported a mean PASI score of 11.5 ± 6.3.[19] In our study, most of the patients had PASI less than 10, which may be because younger population seek medical care as early as possible compared to older population and almost all of our patients were on treatment while being included in our study. Twenty-three patients (32.9 %) had no to small effect on quality of life. Forty seven (67.1%) patients had a moderate effect to extreme effect on the quality of life, which is similar to a previous study conducted in a tertiary care centre in Kerala which reported 71.9% of patients whose quality of life affected.[20] Of the clinical and demographic variables assessed, the quality of life showed statistically significant positive association with stress (p = 0.002) and systemic comorbidities (p =0.046). As psoriasis is a systemic inflammatory disorder, it provides the pathophysiologic link with many associated comorbidities. Therefore, comprehensive screening of comorbidities and appropriate management of psoriasis should have an integrated approach. Previous studies by Moradi et al and Nayak et al reported PASI score correlated significantly with DLQI.[18,21] However, in our study, we found no association. A possible reason may be that most patients in our study had low PASI. In our study, 45 patients (64.3%) reported to have stress similar to a study by Gaikwad et al.[22] and fortune et al.[23] there was statistically significant association with stress and decreased quality of life in our study. Stress can trigger the onset of psoriasis and lead to exacerbation of psoriasis and psoriasis on its own can cause psychological stress, creating a vicious cycle. Finally, it leads to a poor outcome and affects the quality of life. Around 32 patients (45.7%) reported depression similar to Weiss et al[24] & Goipour et al.[25] There was positive correlation between depression and severity of psoriasis (r value 0.025). Various studies on patients with psoriasis have reported a prevalence of depression ranging from 28% to 67%.[26-28] Overall prevalence of depression in our study was 45%. Heterogeneity in the screening tools used and age group of study population in various studies could explain these variations.

In summary, stress, depression, and quality of life were affected in majority of young patients with psoriasis, not only because of the chronic nature of the disease, but also disease severity, associated comorbidities or sites involved in the disease. Hence a multidisciplinary approach should be followed in treating the patients of psoriasis. The psychosocial impact of the disease has to be addressed along with the disease treatment by explaining the course of disease, drug adherence & follow up and stress lowering methods like physical activities, yoga and meditation. Lack of public understanding about the disease and stigma that psoriasis is contagious, affects quality of life. Psoriatic patients feel self-conscious, live in a constant fear of relapse, and avoid social interactions. Financial burden due to the disease adds to depression. So public awareness about the disease is also necessary.

4.1. Strengths of the study

We assessed the quality of life, levels of stress and depression in patients with psoriasis in the age group of 18-35 years. Psychosocial issues are more common in this age group. Adequate sample size helped us to analyze the important variables. We used well validated questionnaires to assess important variables such as stress, depression and quality of life.

5. Conclusion

Our study enrolled young adults affected with psoriasis and found around 50% of young patients with psoriasis irrespective of gender had a poor quality of life, associated stress and depression. Occurrence of such a socially alarming and visible skin disease at crucial phase of life can interfere with their college, job and marriage. Treatment of psoriasis is not by drugs alone, but with psychosocial support as well. So, a multidisciplinary approach is needed. Educating the patient regarding the disease course, precipitating factors and treatment of comorbidities are important. The scoring system which we used for assessing the quality of life, stress and depression are simple and can be used for screening purpose in outpatient department with ease. Assessment and evaluation of physical as well as mental well-being of patients suffering from psoriasis are important, which has been highlighted in this study.

6. Source of Funding

None.

7. Conflicts of Interest

There are no conflicts of interest.

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