

Psoriasis: Age related diagnosis and the impact on quality of life

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ABSTRACT

Background: Psoriasis is a chronic inflammatory disorder with proliferative dermatological and systemic manifestations involving multiple organs. Its etiology and pathogenesis is closely related with genetic and environmental factors. The current study was designed to assess the relationship of age at the diagnosis of psoriasis and its impact on their quality of life. The findings thus obtained might help to take appropriate therapeutic and psychological measures together with patients' counselling to minimize any adverse consequences.

Aim: To determine the age of diagnosis of psoriasis and its impact on the quality of life with age quartiles in psoriasis patients.

Setting: This cross sectional study was carried out in Dermatology out patients department (OPD) affiliated with Liaquat University Hospital (LUH), Hyderabad from December 2019 to June 2020.

Methodology: Total 141 diagnosed cases of psoriasis vulgaris were included in the study. The final data in the form of DLQI SCORE, PASI SCORE in each quartile of age of all patients was collected and findings were noted down in the predesigned proforma.

Results: The average age of the patients included in the study was 37.53±12.12 years. There were 103 (73%) males and 38 females (27%) who consented to be the part of the study. Quality of life among 17 (12.06%) patients had little impact, 42 (29.79%) had moderate effect, 77 (54.61%) patients had severe effect and 5 (3.55%) had extreme effect. There is significant effect with respect to age quartiles at diagnosis of psoriasis ($p=0.005$). Significant effect on quality of life was observed in 1st and 2nd quartile while moderate effect appeared to impact the patients in 3rd quartile of age.

Conclusion: Psoriasis is more than just a skin disorder and has a very large effect on patients' quality of life with noticeable effects having potential to impact their personalities, daily routine activities and even relationships with people around them. Depending upon the severity of the disorder, it could affect quality of life without any discrimination of age, gender, duration and married life of patients. The more it is on the exposed parts, the more it affects their quality of life.

Keywords: Psoriasis, Quality of life, DLQI score, PASI score.

INTRODUCTION

Psoriasis is an inflammatory and proliferative dermatological disorder associated with systemic manifestations in many cases that may involve multiple organs¹. Psoriasis usually manifests in the form of sharply demarcated scaly indurated plaques red in color found mainly on the extensor surfaces of the limbs and scalp. The manifestation of the disorder may vary from person to person due to variable morphology of the disorder^{2,3}. Both genetic and environmental factors have been implicated in the etiology and pathogenesis of psoriasis⁴. Arthritis in psoriatic patients is a usual manifestation that should be clinically screened in patients in routine clinical examinations. The other systemic involvement in patients with psoriasis include obesity, metabolic syndrome, hypertension, diabetes and atherosclerosis⁵.

Psoriasis most commonly affects people between 16-22 years and 57-62 years although the mean age of psoriasis onset is 33 years⁶. The severity of the disorder in the patients could be assessed by PASI or PGA⁷. Two most commonly measured indexes in patients with psoriasis include Health related quality of life (HRQoL) and

dermatology life quality (DLQ) indexes. Both these indexes are commonly employed in clinical trials and clinical practice to assess the quality of life in such patients^{8,9}. The scoring for these indexes is done using a ten-point questionnaire generating a score from 0 to 30. Generally a score greater than 10 has been found associated with a pronounced adverse effect on patients quality of life¹⁰. The studies carried out in this regard have demonstrated that patients diagnosed at a younger age are likely to have a greater lifetime dermatology life quality index (LTDLQI; $p<0.001$) with disturbed sleep ($p=0.004$), using recreational drugs ($p<0.001$), hiding psoriasis on context of social stigma ($p<0.001$), and experiencing severe bias among people and in their social life ($p=0.002$). It thus can be concluded that people with early onset psoriasis tend to have depression with social isolation at younger age leading to greater impact on LTDLQI¹¹.

The present study is aimed to find the correlation between the age of onset of the psoriasis and its impact on their quality of life as the studies conducted so far in this regard have an inverse relationship between the two. In this study we have tried to find out the effect of the disorder on quality of life in such patients with different age quartiles and to compare the effects among them as well. The findings thus obtained could be utilized to take appropriate therapeutic measures together with psychological

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counselling to minimize the adverse consequences in patients with psoriasis.

The objective of the study was to determine the age of diagnosis of psoriasis and its impact on the quality of life with age quartiles in psoriasis patients.

MATERIAL AND METHODS

This cross sectional study was conducted in OPD of Department of Dermatology affiliated to Liaquat University Hospital, Hyderabad after permission from Ethical Committee, during a period of six months from December, 2019 to June, 2020. Using WHO sample size calculator, 5% prevalence for extremely large effect on patients' life with 95% confidence level, the margin of error 3.6%, the calculated sample size was 141.

Sample Selection: Fulfilling inclusion and exclusion criteria.

Inclusion Criteria: Confirmed cases of psoriasis vulgaris for last six months on the basis of PASI score and having the age of 16-83 years were included. It was ensured that all such patients were willing to take part in study with valid consent to fill the DLQI questionnaire.

Exclusion Criteria: Patients with other internal comorbidities like diabetes, hypertension, ischemic heart disease, any known psychological disease or memory problem, and non-cooperative patients were excluded from the study.

Data Collection Method: Study was carried out in outpatients department of Dermatology department at Liaquat University hospital Hyderabad. The psoriatic patients fulfilling the inclusion criteria were included in the study with written informed consent for participation in the study. Predesigned proforma of DLQI questionnaire was filled by the research officer for every participating individual on the basis of the knowledge obtained from him. PASI score was calculated and the final data were collected in the form of DLQI score, PASI score for each quartile of age in the proforma.

Quality of Life: The quality of life for each patient with psoriasis was determined with sum of DLQI score at respective quartile of age. Greater the score means greater damage to the quality of life.

Score	Effect
0-1	No effect at all on patient's life (N)
2-5	Small effect on patient's life (S)
6-10	Moderate effect on patient's life (M)
11-20	Very large effect on patient's life (L)
21-30	Extremely large effect on patient's life (XL)

Data Analysis Procedure: The data obtained from the patients were analyzed using Statistical Package for Social Sciences (SPSS) version 20. Mean standard deviation was calculated for age, duration of psoriasis, PASI score and DLQI score. Incidence and percentage was calculated for gender, severity of PASI score and quality of life and age quartiles. Comparison for quality of life in each quartile was carried out using Chi square test. Modifiable factors such as age, gender, severity of psoriasis and duration for quality of life was addressed through post stratification, Chi square test was applied. $p \leq 0.05$ was taken on significant.

RESULTS

One hundred and forty one diagnosed cases of psoriasis vulgaris consented to participate in this study. Age distribution of all included patients is shown in Figure-1. As the table-1 indicates that the average age of patients was 37 ± 12.12 years. There were 103 (73.05%) males and 38 (26.95%) female patients as shown in Figure-2. Age at the time of diagnosis is shown in Figure-3 whereas the extent of the disease severity has been demonstrated in Figure-4 which shows that 91 (64.54%) patients had severe psoriasis.

Figure 1: Age distribution of the Patients (n=141)

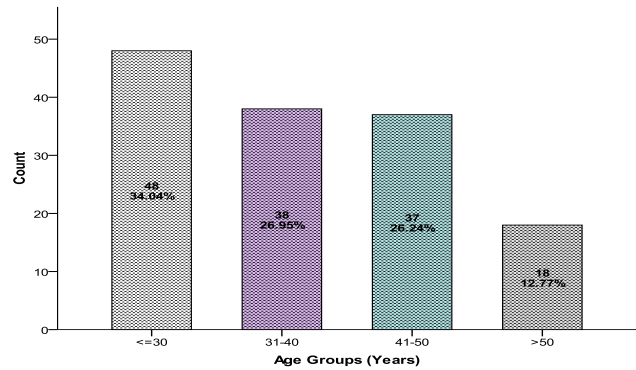


Figure 2: Sex distribution of the Patients (n=141)

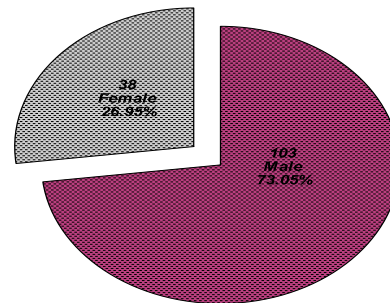
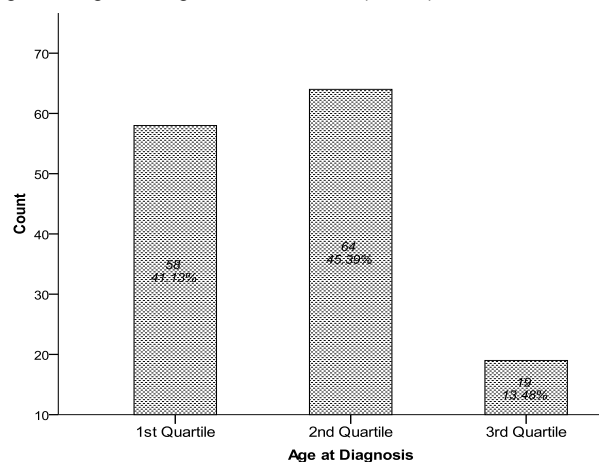


Figure 3: Age at Diagnosis of Psoriasis (n=141)



Quality of life among psoriasis patients was evaluated through DLQI score and has been presented in Figure-5. The effect on the Quality of life among psoriasis patients concluded that 17 (12.06%) patients had small effect, 42 (29.79%) had moderate effect, 77(54.61%) had very severe effect and 5(3.55%) had extremely severe effect on their quality of life. The resemblance of quality of life among age quartiles in psoriasis patients is presented in Table-2. There is significant impact with respect to age quartiles at diagnosis of psoriasis (p=0.005). There was very severe effect on patient's life and which was noticed in 1st and 2nd quartile while moderate effect was observed during 3rd quartile of age.

Figure 4: Severity of Psoriasis Assessed through P Score (n=141)

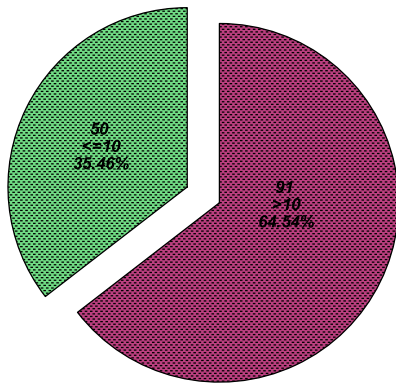
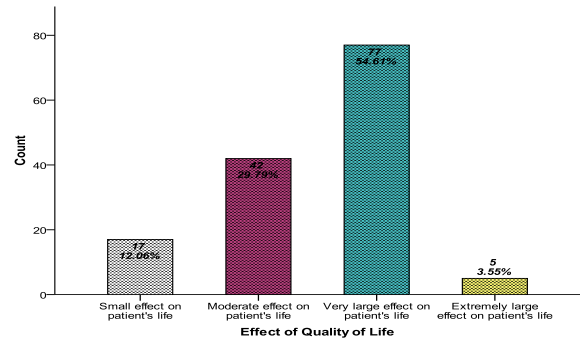


Figure 5: QoL among Psoriasis Patients (n=141)



Stratification analysis was performed and observed that quality of life was much affected in below and equal to 40 years of age and was not significant. Similarly, quality of life was not statistically significant in terms of gender and duration distribution but moderate and severe effects were observed on patient's life where >10 PASI was observed (p=0.002). Comparison of quality of life among age quartiles in psoriasis patients was also observed with respect to age groups, gender, duration and severity of PASI score but insignificant difference was observed.

Table 1: Descriptive Statistics

Variables	Mean	95% Confidence Interval for Mean		Std. Deviation
		Lower Bound	Upper Bound	
Age (Years)	37.52	35.50	39.54	12.12
Age at Diagnosis (months)	27.13	25.74	28.53	8.36
Duration of disease (Years)	10.40	9.06	11.74	8.05
PASI Score	13.30	12.27	14.34	6.19
DLQI Score	11.65	10.84	12.45	4.82

Table 2: Comparing the QoL with Age Quartiles in Psoriasis Patients (n=141)

Effect of Quality of life	Age at Diagnosis			Total
	1 st Quartile (n=58)	2 nd Quartile (n=64)	3 rd Quartile (n=19)	
Small effect on patient's life	11(19%)	6(9.4%)	0(0%)	17
Moderate effect on patient's life	17(29.3%)	13(20.3%)	12(63.2%)	42
Very large effect on patient's life	28(48.3%)	43(67.2%)	6(31.6%)	77
Extremely large effect on patient's life	2(3.4%)	2(3.1%)	1(5.3%)	5

P value 0.005

DISCUSSION

Psoriasis is a progressive chronic inflammatory disorder observed commonly in our population with predilection for extensors. The presence of Psoriasis on exposed parts had led to sever cosmetic and psychosexual disabilities¹⁰. These patients have social phobia, interpersonal fears, shattered confidence, devalued self-worth, depression, and hesitance about entering in a n intimated relationship due to embarrassment. When asked, patients who have other medical problems too, almost always preferred their psoriasis to be cured in the first instance. In our study, there were 73.05% males and 26.95% females. Out of these, 91 patients (64.54%) had severe psoriasis. These results are similar to those of Finlay et al¹² and Manjula et

al¹³ but are in contradiction to Pal et al where males who were in their 4th decade were more severely affected than females who were in 5th decade of their life^{14,15}.

In our study, mean age of the patients came out to be 34.89±14.963 years, however age and gender did not show any relationship to DLQI. Almost similar results have also been demonstrated by Rahman et al, Finlay et al and Manjula et al¹²⁻¹⁶.

DLQI scoring system has been devised to analyze the effect on patient's life. The effect on quality of life among psoriasis patients include 12.06% patients had less effect, 29.79% had moderate effect, 54.61% had severe effect and 3.55% had very severe effect. These results are very close to the study conducted by Rahman et al, where 12.5% patients' score lied between 3 and 5 indicating small

effect on the lives of patients with psoriasis. In addition, 27.5% patients had score between 6 and 10 showing that psoriasis was moderately affecting their lives. With regard to severe effect on quality of life, the mentioned study reported only 45% of the participated patients who scored between 11-20 whereas only 5% of patients scored between 21-30 indicating extremely severe impact on their quality of life¹⁶.

In our study, around 88% (29.79%+ 54.61%+ 3.55%) of patients had impaired quality of life if we do not include the 12.06% of patients who had very little impact on their life due to psoriasis. This figure is close to the study conducted by Manjula et al where >90% had impaired QoL, however significantly lower percentage of patients had been reported by National Psoriasis Foundation where only 50% of patients had their QoL impaired. Tsai et al also reported somewhat close figure (52.46%) to that of National Psoriasis Foundation.

In this study, there is significant effect with respect to age quartiles at diagnosis of psoriasis ($p=0.005$). Significantly severe impact on patients' lives was observed in 1st and 2nd quartile while moderate effect was reported in the 3rd quartile of age (Table 2). These results suggest that there is no relationship that could explain any sort of association between the age and quality of life. This is contradictory to the results reported by Rahman et al who also found out the DLQI (dermatology life quality index) with respect to age group of patients. He reported severe impact on quality of life in all age quartiles¹⁶.

CONCLUSION

In the light of above discussion, it can safely be concluded that psoriasis is not only a physical morbidity involving skin but it is also associated with social and psychological morbidities as well that could prevent the patients from participating in social activities and playing their active role as a beneficial citizen of society. We therefore recommend that clinicians should adopt an empathic attitude while treating these patients and they should not ignore the social stigma associated with such type of disorders. Furthermore, psychosocial counselling must be provided to such patients from time to time so that they should not limit their social activities which otherwise could lead in social isolation and unwanted results (such as suicide) from the perspective of any society.

Conflict of interest: Nil

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