

A study of role of psychological stress on physical disability in the patients with psoriasis at tertiary health care centre

Patil Reshma Tanaji¹, Harnalika Manoj^{2*}

¹Assistant Professor, ²Associate Professor, Department of Dermatology Dr. Shankar Rao Chavan Government Medical College Nanded, Maharashtra, INDIA.

Email: drmanojh@gmail.com

Abstract

Background: The physical and psychosocial aspect of psoriasis interact and influence one another in reciprocal way to create an overall clinical picture. The disease is enormously variable in duration, periodicity of flares and extent. The afflicted often feel self-conscious, helpless, embarrassed, angry and frustrated about their disease. **Aim and objectives:** To study role of psychological stress on physical disability in the patients with psoriasis at tertiary health care centre. **Methodology:** It's a cross sectional, observational study consisting of 50 cases having chronic plaque psoriasis aged between 18-60 years of both sexes and duration of disease of at least 3 months included in the study. Study period is of 2 years from November 2010 to October 2012 and data collected from two hospitals attached to a tertiary health care centre. Psoriasis Disability Index (PDI) and Psoriasis life stress inventory (PLSI) Questionnaires were used as study tools. The data was collected and analyzed using appropriate statistical methods. **Results:** There were 41 male and 9 female patients. Mean age of onset of psoriasis was 33.6 years. Mean duration of disease was 7.3 years. The mean PDI and PLSI were 15.98 (35.51%) and 18.04 (40.08%) respectively. **Conclusions:** Increasing stress due to psoriasis is the significant factor responsible for higher physical disability. The good support from family members, friends, and people at the working place other than the patient can take off or minimize the psychological stress of the patient which can definitely improve quality of life of the patient.

Key Words: Physical disability, stress.

* Address for Correspondence:

Dr. Harnalika Manoj, Associate Professor, Department of Dermatology Dr. Shankar Rao Chavan Government Medical College Nanded, Maharashtra, INDIA.

Email: drmanojh@gmail.com

Received Date: 14/12/2017 Revised Date: 10/01/2018 Accepted Date: 02/02/2018

DOI: <https://doi.org/10.26611/106524>

Access this article online

| | |
|---|--|
| Quick Response Code: | Website: www.medpulse.in |
|  | Accessed Date: 04 February 2018 |

INTRODUCTION

Psoriasis is most frequent cause of hospitalization for dermatology patients.¹ It affects activities of daily living, emotional perceptions, sexual relationships, the decision to have children, and career choices.² It's a common,

chronic, disfiguring, inflammatory and proliferative condition of the skin, in which both genetic and environmental influences have a critical role. The most characteristic lesions consist of red, scaly, sharply demarcated, indurated plaques, present particularly over extensor surfaces and scalp. The disease is enormously variable in duration, periodicity of flares and extent.³ Psoriasis affects 1% to 3% of general population and estimates suggest that 0.4% to 2.3% of adult population have psoriasis but remain undiagnosed. Psoriasis is associated with impairments in health-related quality of life even in mild cases.⁴ Psoriasis patients often experience anguish, stress, and emotional disruption in their daily lives, their relationship with others, and their perception of themselves. They often report feeling stigmatized and tend to be anxious and depressed and to engage in excessive worrying.⁵ The physical and

psychosocial aspect of psoriasis interact and influence one another in reciprocal way to create an overall clinical picture. Prevalence of depression in patients with psoriasis ranges between 10% and 58%. Role of stressful events in psoriasis seems to be clear for both onset and relapses.⁶

MATERIAL AND METHODS

It's a cross sectional, observational study consisting of 50 cases having chronic plaque psoriasis aged between 18-60 years of both sexes and duration of disease of at least 3 months attending the Department of Dermatology, Venereology and Leprology at Bapuji Hospital and Chigateri General Hospital attached to J.J.M. Medical College, Davangere constituted the source for a period of 2 years from November 2010 to October 2012. After obtaining the informed consent, patients of chronic plaques psoriasis were enrolled in the study.

Inclusion Criteria

- Age between 18-60 years.
- Patients with no significant medical conditions except psoriasis.
- Duration of the disease of at least 3 months.
- Patients willing for enrollment for study and able to come for regular follow up.

Exclusion Criteria

- Age <18 years and above 60 years.
- Psoriasis associated with any other major diseases.
- Patients unwilling for inclusion in the study and those who are not able to come for follow up.
- Pregnant women.

Pre-designed and pre-tested questionnaire which used for data collection from the psoriasis patients after applying the inclusion and exclusion criterias adequately. The statistical analysis was done by using appropriate statistical procedures.

Quality of life assessed by using questionnaires which were asked verbally. The Psoriasis Disability Index⁷ was calculated by summing the score of the 15 questions on a scale of 0-3. The higher the score, the more quality of life is impaired. The PDI can also expressed as a percentage of the maximum possible score of 45.

Psoriasis life stress inventory (PLSI)⁷: The PLSI was designed to obtain an index of the stress associated with having to cope with a variety of psoriasis-related events. It was constructed by questioning psoriasis patients about specific events and asking them to assess the physical appearance and symptoms of their skin. A high degree of internal consistency was found within the items (Cronbach's alpha 0.9). It was found that groups who had high PLSI (i.e., ≥ 10) also had a greater overall severity of psoriasis and greater psoriasis severity in body regions

that lead to the greatest cosmetic disfigurement. The PLSI is used alongside the SF-36 and PDI, in addition to other psychologic measures. It shows comparability with PASI scores. It also is used to assess patients suffering from psoriatic arthritis. We assessed the stress incurred by the patient using the psoriasis life stress inventory (PLSI) scores on this scale ranged from 0 to 45.

RESULTS AND OBSERVATIONS

Table 1: Age and Gender wise distribution of patients

| Gender | Mean age in years |
|---------|-------------------|
| Males | 43.2 ± 11.4 |
| Females | 32.2 ± 12.8 |

In the present study, out of 50 patients, 41 (82%) were males and 9 (18%) were females.

Table 2: Distribution of patients depending on various socio-demographic variables

| Demographic variables | Patient distribution | | |
|-----------------------|----------------------|---------------|----|
| | Frequency (N=50) | Percentage(%) | |
| Gender | Male | 41 | 82 |
| | Female | 09 | 18 |
| Married Status | Married | 41 | 82 |
| | Unmarried | 08 | 16 |
| | Widowed | 01 | 02 |
| Socioeconomic status | I | 00 | 00 |
| | II | 17 | 34 |
| | III | 17 | 34 |
| | IV | 15 | 30 |
| | V | 01 | 02 |
| Residence | Rural | 24 | 48 |
| | Urban | 26 | 52 |
| Habits | Alcohol | 06 | 12 |
| | Smoking | 12 | 24 |
| | Alcohol and smoking | 09 | 18 |
| | No any habit | 23 | 46 |

In the present study, out of 50 patients 41 (82%) were married, 8 (16%) were unmarried and 1 (2%) was widow and 8 (16%) patients had onset of disease before the marriage and 33 (66%) had onset of disease after the marriage. All the patients were almost equally distributed in class II, III and IV according to Kuppaswamy's socio-economic status scale. There is almost equal distribution of patients from rural (48%) and urban (52%) areas. Out of 50 patients, 24% patients were smoker, 12% were alcoholic and 18% were having habits of both smoking and alcohol consumption.

Table 3: Mean values of Psoriasis Disability Index (PDI)

| Sex | Mean±SD |
|--------|-----------|
| Male | 16.3± 7.8 |
| Female | 14.6± 6.6 |

In the present study, the mean PDI was 15.98 (35.51%). Mean PDI in males and females was 16.3 ± 7.8 and 14.6 ± 6.6 respectively.

Table 4: Mean values of Psoriasis life stress inventory (PLSI)

| Sex | Mean \pm SD |
|--------|----------------|
| Male | 17.8 \pm 6.3 |
| Female | 19.0 \pm 8 |

In the present study, the mean PLSI was 18.04 (40.08%) and the mean PLSI in males and females was 17.8 ± 6.3 and 19.0 ± 8 respectively. Among the psycho-social measures investigated, psoriasis sufferers were found most likely to feel disturbed/ depressed by shedding of skin, heard insensitive remarks/ comments, felt self-conscious among strangers, spent more time on taking care of themselves, felt degraded by people implying the skin condition as AIDS, leprosy or venereal disease. Whereas problem like avoidance of sunbathing was not at all affected.

DISCUSSION

In the present study, mean age (in years) in males and females was 43.2 ± 11.4 and 32.2 ± 12.8 respectively. In the study of Rakhesh SV *et al*⁸ mean age in males was 40.52 ± 12.02 years whereas in females it was 34.02 ± 12.20 years. Whereas in the study of Gupta S *et al*⁹ mean age in males was 47 ± 15.3 years and in females it was 49.1 ± 16.5 years. Thus mean age is variable in different studies. From our study, out of 50 patients 41 (82%) were males and 9 (18%) were females. In the studies of Gelfand *et al*¹⁰, Manjula *et al*¹¹, Pakran *et al*¹², Hariram *et al*¹³, males were more affected. Thus, there is a difference in sex distribution among the patients which could be probably due to variations about the knowledge of the disease in different areas as well as the amount of eagerness in seeking the treatment for the problem. About marital status, in the studies of Finlay *et al*¹⁴, Zachariae *et al*¹⁵ similar observations were made i.e. more number of married individuals than unmarried. Whereas in study of Manolachee *et al*¹⁶ number of married and unmarried patients were equal. All the patients in our study were almost equally distributed in class II, III and IV according to Kuppaswamy's socio-economic status scale. There is almost equal distribution of patients from rural (48%) and urban (52%) areas. In the present study, the mean PDI was 15.98 (35.5%). Similar observation was made in the study of Rakhesh SV *et al*⁸ whereas in the study of Pakran *et al*¹² it was low as compared to our study. In the present study the mean PDI in males and females was 16.3 ± 7.8 and 14.6 ± 6.6 respectively. In the study of Rakhesh SV *et al*⁸ mean PDI in male was 15.56 ± 7.00 but in female mean PDI was high (20.25 ± 9.30). PDI in the patients of psoriasis is variable in males and females. In the present study it could be due to the system of outdoor work,

manual labour which is more in male. Regarding PLSI, the mean PLSI was 18.04 (40.08%) and mean PLSI in males and females was 17.8 ± 6.3 and 19.0 ± 8 respectively. In the study of Rakhesh *et al*⁸ the mean PLSI and mean PLSI in males and females were high [26.72 (50%)] as compared to our study. PLSI can vary from person to person. In females it is high because of social stigma, cosmetic reasons. It may affect their marriage issues. About analysis of pattern of response in PLSI questionnaire, a comparable observations were seen in study by Rakhesh SV *et al*⁸ but, in their study they had deleted the question regarding sunbathing as they found it obsolete. This could be because psoriasis is a chronic disease which causes cosmetic disfigurement, social stigma, sometimes people treat the condition as contagious.

SUMMARY AND CONCLUSIONS

From our present study we can conclude that, stress is the significant factor and with raising severity of it, naturally there will be higher physical disability. Extensive shedding of scales seems to add significant stress which could be due to the comments in the social life and also the inconvenience caused by shedding of the scales and also due to misconception about the disease in the society. Thus though psoriasis is defined as disease with very mild or no symptoms, when it is extensive and chronic, it could be a cause for social hindrance, depression, indulgence in unwanted habits. The good support from family members, friends, and people at the working place other than the patient can take off or minimize the psychological stress of the patient which can definitely improve quality of life of the patient.

REFERENCES

1. Kurwa HA, Finlay AY. Dermatology in patient – management greatly improves life quality. *Br J Dermatol* 1995; 133: 575-578.
2. Gupta MA, Gupta AK. Psoriasis and sex: a study of moderately to severely affected patients. *Int J Dermatol* 1997; 36: 259-62.
3. Boyd AS, Morris LF, Phillips CM, Menter MA. Psoriasis and pregnancy: hormone and immune system interaction. *Int J Dermatol* 1996; 35: 169-72.
4. Lomholt G. Prevalence of skin diseases in a population, a census study from the Faroe Islands. *Danned Bull.* 1964; 11: 1-7.
5. Yang Y, Koh D, Khoo L, Nyunt SZ, Goh CL. The psoriasis disability index in Chinese patients: contribution of clinical and psychological variables. *Int J Dermatol* 2005, 44, 925-29.
6. Arruda L, Moraes A. The impact of psoriasis on quality of life. *British J Dermatol* 2001; 144, (suppl.58): 33-36.
7. Lewis VJ, Finlay AY. A critical review of quality -of-life scales for psoriasis. *Dermatol Clin* 2005; 23: 707-716

8. Rakhesh SV, D'Souza M, Sahai A. Quality of life in psoriasis: A study from south India. *Indian J DermatolVenereolLepr* 2008;74:600-6.
9. Gupta S, Moradi A, Ardekani GS. Impact of psoriasis on quality of life in Iran. *Indian J DermatolVenereolLepr* 2009;75:220.
10. Gelfand JM, Feldman SR, Stern RS, Thomas J, Rolstad T, Margolis D. Determinants of quality of life in patients with psoriasis: A study from the US population. *J Am AcadDermatol* 2004;51:704-8.
11. Manjula VD, Sreekiran S, P Surendran, Sreekanth MP. A study of psoriasis and quality of life in a tertiary care teaching hospital of Kottayam, Kerala. *Indian J Dermatol* 2011;56(4):403-6.
12. Pakran J, Riyaz N, Nandkumar G. Determinants of quality of life in psoriasis patients: A cluster analysis of 50 patients. *Indian J Dermatol* 2011;56(6):689-93.
13. Hariram P, Mosam A, Aboobaker J, Esterhuizen T. Quality of life in psoriasis patients in KwaZulu Natal, South Africa. *Indian J DermatolVenereolLepr* 2011;77:333-34.
14. Finlay AY, Khan GK, Luscombe DK, Salek MS. Validation of sickness impact profile and psoriasis disability index in psoriasis. *British J Dermatol* 1990; 123:751-56.
15. Zachariae R, Zachariae H, Blomqvist K, Davidsson S, Molin L, Mork C, Sigurgeirsson B. Epidemiology and health services research quality of life in 6497 Nordic patients with psoriasis. *British J Dermatol* 2002; 146: 1006-1016.
16. Manolache L, Petrescu-Seceleanu D, Benea V. Life events involvement in psoriasis onset/ recurrence. *International J Dermatol* 2010;49:636-41.

Source of Support: None Declared
Conflict of Interest: None Declared

