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STUDY OF EPIDEMIOLOGY, LIFE QUALITY AND PSYCHOLOGICAL IMPACT OF PSORIASIS

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ABSTRACT

Background: Psoriasis is a common, chronic, disfiguring, inflammatory and proliferative condition of the skin in which both genetic and environmental influences have an important role. Stress can also play an important role in the provocation of the disease.

Objectives: To assess the epidemiology, clinical characteristics and quality of life (QoL) of patients with psoriasis.

Methods: A cross-sectional and observational study was conducted at the psoriasis clinic of Dermatology Department of the Tirunelveli Medical College Hospital between august 2013 and september 2013 applying an epidemiological and QoL-related survey to psoriatic patients (age10-60years).

Results: Sixty Three patients with psoriasis were included in the study.Men accounted for 50.79% of the sample and women 49.20%. Psoriasis vulgaris was the predominant morphological type (52.38%), followed by palmoplantar psoriasis (22.22%). Nearly 32.0% of patients had less than 10% of BSA affected, while 41.0% had 10% to 30%, and 26.98% had >30.0% BSA involved. There was no significant joint involvement. Hypertension and diabetes were present in 17.46 % and 9.52 % of patients, respectively. The mean Dermatology Life Quality Index was 28.66 . Greater impact of the disease on QoL was associated with female sex in the age group of 10-20 years.

Conclusion: In our study we found out that the incidence of psoriasis is about 3.15%. Psoriasis vulgaris was the common disease among various skin conditions identified in patients attending the outpatient department of Dermatology.

KEYWORDS : Psoriasis, Quality of life, Epidemiological study.

INTRODUCTION:

Psoriasis is almost universally present in the human population. Prevalence studies from India are mostly hospital-based. Okhandiar *et al.*[1] collected a comprehensive data from various medical colleges located in Dibrugarh, Calcutta, Patna, Darbhanga, Lucknow, New Delhi and Amritsar. They found that the incidence of psoriasis among total skin patients ranged between 0.44 and 2.2%, with overall incidence of 1.02%. They noted that the incidence in Amritsar (2.2%) was higher as compared to other centers in Northern and Eastern India and speculated that it may be related to different environmental conditions (extremes of temperature), dietary habits, and genetic differences.The mean worldwide prevalence of psoriasis is considered to be around 2%[2]. Moreover, it has been reported that the prevalence of psoriasis varies with climatic conditions and is more common in colder climates than in tropical regions[2]. It is known that psoriasis has a substantial impact on quality of life (QoL). A systematic review of literature established that patients with psoriasis suffer physical discomfort, impaired emotional functioning, a negative body self-image and limitations in daily activities, social contacts , work and suicidal tendencies[3].

The purpose of this study was to determine epidemiological features and the impact on QoL of psoriasis in patients coming to the psoriasis clinic of the dermatology department of Tirunelveli medical college and hospital.

METHODOLOGY:

An observational and cross-sectional study evaluating clinical, epidemiological and QoL-related features of psoriasis was carried out from august 2013 to september 2013 at the psoriasis clinic of the Dermatology Department of the Tirunelveli medical college and hospital.

INCLUSION CRITERIA:

All psoriasis patients who attended the psoriasis clinic within the age group of 10 to 60 years regardless of sex, race, religion, social status , occupation and treatment history.

EXCLUSION CRITERIA:

- Patients below the age group of 10 years and above 60 years .
- Conditions like eczema which mimicks psoriasis.
- Psychiatric and mentally deranged patients & those who are terminally ill.

A proforma was designed, including information on gender, current age, clinical type of psoriasis with duration , body surface area (BSA) affected by psoriasis, family history, previous treatment details including treatment for Diabetes mellitus, Hypertension , any psychiatric illness, age at onset of psoriasis, co-morbidities. All psoriatic patients seen during the study period were informed of the survey and consent was obtained prior to participation.

Patients then completed the tamil version of the Dermatology Life Quality Index (DLQI), which includes 10 questions and is designed for use in adults. It is self-explanatory and can be simply handed to the patient who is asked to fill it in without the need for detailed explanation. The scoring of each question is as follows: very much, 3; a lot, 2; a little, 1; not at all, 0; not relevant, 0; question unanswered, 0. The DLQI is calculated by summing up the score on each question, resulting in a maximum of 30 and a minimum of 0. The higher the score, the greater the impairment of QoL. The DLQI can also be expressed as a percentage of the maximum possible score of 30. DLQI scores are interpreted as follows: 0-1, no effect at all on QoL; 2-5, small impact on patient's QoL; 6-10, moderate impact on patient's QoL; 11-20, very large impact on patient's QoL; 21-30, extremely large impact on patient's QoL.

For the analysis of early versus late onset psoriasis, we separated the sample into 2 groups. Early onset was defined as psoriasis that appeared at 0 to 30 years and late onset as that appearing in patients older than 30 years[6].

RESULT:

Between August 2013 to september 2013, 63 outpatients with a diagnosis of psoriasis attending the Dermatology Department of the Tirunelveli medical college and hospital were included in the study.

The overall incidence of psoriasis in our OP clinic was about 3.15%. Men accounted for 50.79% of the sample and women 49.2%. The

distribution in age ranges was as follows:10-20 years ,26.98% ; 21-40 years, 30.15% ;and 41-60 years ,53.96%.

Psoriasis vulgaris was the predominant morphological type (52.38%), followed by palmoplantar psoriasis (22.22%) and inverse type (4.76%). Uncommon types were erythrodermic psoriasis (7.93%) **(Figure 1)**, generalized pustular psoriasis (3.17%), and nail or scalp psoriasis (4.76%) **(Figure 2)** . Most children manifest with plaque-type psoriasis vulgaris (6.34%) in similar patterns to adult patients, with lesions localized to the scalp, post auricular region ,trunk, elbows, and knees. **(Table1)**

Nearly 31.74% of patients had less than 10% of BSA affected, while 41.26% had 10% to 30%, and 26.98% had >30.0% BSA involved. Women had a higher BSA affected than men**.(Table 2).**

The duration of the disease at the time of the study was less than 1 year in 46.0% of patients, 1 to 4 years in 20.0%, 5 to 9 years in 30.0%, 10 to 20 years in 2.0% of patients.

Among reported selected comorbidities, 17.46% of our sample had high blood pressure and 9.52% had diabetes mellitus **(Table 3)**. There was no significant joint involvement among the patients.

In order to find differences between patients with early and late psoriatic onset, patients were classified into the 2 different groups (onset up to or after the age of 30)[4,5] .The early-onset group included 20 patients and the late-onset group 43 patients. However, in the early-onset group there was a slight but significantly greater number of women (13 women versus 7 men). The late-onset group had more psoriasis vulgaris than the early-onset group . All patients with pustular psoriasis belonged to the early-onset psoriasis group. The late-onset group had proportionally more erythrodermic psoriasis than the early-onset one**.(Table 4)**

In order to evaluate the impact on QoL, the Tamil version of DLQI was applied. The mean DLQI was 28.66 ("extremely large impact"). The impact on QoL was significantly higher for women (mean DLQI 15.33) than for men (mean DLQI 13.33) **(Table 5)** . The most affected QoL domains were symptoms and feelings , daily activities, and treatment. There were statistically significant differences between sexes in the leisure, personal relationships, and treatment domains. Though the mean impact was greater for men, women within the age group of 10-20 years(women 4.6 versus men 2) were more affected in all these domains compared with men **.**

DISCUSSION:

This study includes outpatients with psoriasis seen in our department over a period of 2 months .

The distribution of psoriasis subtypes in our sample was similar to published data. A recent study from the Iberian region reported the following distribution of psoriasis subtypes: vulgaris (79.8%), guttate (6.7%), palmoplantar (4.0%), erythrodermic (4.3%), pustular (1.8%) and other types (3.3%)[6] . All of the proportions were very similar to our data, except for palmoplantar psoriasis which is greater in our study. Another study from Japan, which enrolled over 28 000 patients with psoriasis, reported 86.0% plaque psoriasis, 2.8% guttate psoriasis, 0.8% psoriatic erythroderma, 0.9% generalized pustular psoriasis, and 0.5% localized pustular psoriasis.[7] The most frequent manifestation of psoriasis in all these studies is chronic plaque-type psoriasis,[6,7] as in our study.

Comparing early- and late-onset psoriatic groups, psoriasis vulgaris was more frequent in the late onset group, whereas pustular psoriasis were more frequent in the early-onset group. These differences were not significant but are in agreement with the results of the previously mentioned Spanish study that separated patients with psoriasis into early and late onset of disease.[4]

In relation to anatomical distribution, we found that the most frequently involved areas (from greater to lesser) were lower limbs, upper limbs, trunk and scalp. Kawada et al[7] reported similar results from a large study. In our study, women had a larger affected BSA than men, and more than 66% of our patients had more than 10% of BSA involved. Similar results were reported in the Iberian population.[4,6].

High blood pressure and diabetes mellitus were present as comorbidities in 22.0% and 12.0% of our sample, respectively. Again, these data are very similar to those described by García-Díez et al[6] for Spanish and Portuguese patients (20.2% for high blood pressure and 8.3% for diabetes).

Current studies have given some evidence of an association between psoriasis and diabetes mellitus, hypertension, atherosclerosis, obesity, and ischemic heart disease.[8] However, further studies are needed to support these observations.

Health professionals tend to underscore the impact of skin diseases because most of them are not life threatening and have a chronic course.[3] Psoriasis fulfills these characteristics and many physicians underestimate patients' feelings about their condition; nevertheless, it is well known that psoriasis has a major impact on patient QoL.[9] Furthermore, psoriasis has been shown to impact patient QoL to the same degree as other more life-threatening disorders such as diabetes, heart disease, and cancer,[10] and this has been associated with depression[10,11] and suicidal ideation.[12] Psoriatic patients report physical discomfort, impaired emotional functioning, a negative body- and self-image, and limitations in daily activities, social contacts, outdoor activities, and work.[3,4]

Mean DLQI in our patients was 28.66 ("very large effect" on patient's life). This value is similar to or higher than that reported in the international literature.5 This may be due to disease characteristics (more than 66 % of our patients had >10% BSA affected). A recent study suggested that psoriatic patients from different countries answer differently on the DLQI, despite having the same grade of underlying health-related QoL impairment.13 Even among native English-speaking patients, some differences were found; this may be due to cultural equivalence or the use of the original DLQI. Sensitive words expressing emotions may be translated but still have different connotations between different cultures. This point may interfere in the comparison between our results and those reported in the international literature.

It has been proposed that shame related to psoriasis is greatest in individuals under 30 years, when they are initiating social relationships and starting their career.[14] It has also been suggested that psoriasis has a greater impact on QoL when the disease affects "sensitive areas"(face,hands and genitalia) , more extended areas, and in the first years following onset.[15]

Recent work has identified that pathological worry and anxiety occur in at least a third of patients with psoriasis and that psychological interpersonal difficulties impinge on all aspects of the patient's daily life.[16,17] The two main contributors to stress in patients with psoriasis are engaging in avoidance behaviour and the belief that they are being evaluated on the basis of their skin disease. This constraining, avoidance behaviour may lead to low grade persistent stress.

CONCLUSION:

In our study we found out that Psoriasis vulgaris was the most common among the various skin conditions identified in patients (age between 10 and 60 years) attending the outpatient depart ment of Department of Dermatology.

This study verifies that clinical features in psoriatic patients are comparable to international patterns and that the disease has a negative impact on patient QoL.

However further longterm studies are needed in order to obtain the

real prevalence and incidence of the disease and to detail these noteworthy findings in relation to DLQI in indian patients with psoriasis.

Table 1:Morphology of psoriasis in realtion to sex and age .

MORPHOLOGY	MALE			FEMALE			TOTAL(%)
	AGE(10-20YRS)	AGE(21-40YRS)	AGE (41-60 YRS)	AGE(10-20YRS)	AGE(21-40YRS)	AGE (41-60 YRS)	
Psoriasis vulgaris	2	7	9	3	6	6	33(52.38%)
Palmoplantar psoriasis	0	2	4	1	1	6	14(22.22%)
Inverse psoriasis	1	0	1	0	1	0	3 (4.76%)
Erythrodermatic psoriasis	0	1	2	0	0	2	5 (7.93%)
Pustular psoriasis	0	0	0	1	1	0	2 (3.17%)
Scalp psoriasis	0	0	1	1	0	1	3 (4.76%)
Nail psoriasis	0	0	2	1	0	0	3 (4.76%)

Table 2: Co-morbidities in psoriasis

CO-MORBIDITIES	MALE	FEMALE	AGE(10-20YRS)	AGE(21-40YRS)	AGE (41-60 YRS)
Diabetes mellitus	3(4.76%)	3(4.76%)	0 (0.0%)	2 (3.17%)	4 (6.34%)
Hypertension	7(11.11 %)	4(6.34%)	0 (0.0%)	3 (4.76%)	8 (12.69%)

Table 3. Body surface area affected in relation with age and sex

BSA	MEN			WOMEN			TOTAL(%)
	AGE(10-20YRS)	AGE(21-40YRS)	AGE (41-60 YRS)	AGE(10-20YRS)	AGE(21-40YRS)	AGE (41-60 YRS)	
<10%	1	5	3	3	4	4	20(31.74%)
10%-30%	1	3	9	2	4	7	26(41.26%)
>30%	1	2	7	2	1	4	17(26.98%)

Table 4: Sex distribution of Psoriasis in Patients With Early-Onset and Late-Onset Disease (N=63).

ONSET	MALE	FEMALE
Early Onset (0-30 y) (n=20), n (%)	7 (35.0%)	13 (65%)
Late Onset (> 30 y) (n=43), n (%)	21 (48.83%)	22 (51.16%)

Table 5: Comparison of Dermatology Life Quality Index (DLQI)

	DLQI
Total	28.66
DLQI	DLQI
Men	women
13.33	15.33

According to Sex and onset of age.

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LEGENDS FOR ILLUSTRATIONS:

FIGURE 1: SCALP PSORIASIS .Well defined scaly plaques seen in the scalp of a 12 year old female patient.

FIGURE 2: ERYTHRODERMIC PSORIASIS .Erythromatous scaly plaques seen in the extensor aspect of lower limb of a 45 year old female patient.

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