Original Research Article

Assessment of prescribing pattern and quality of life of dermatology patients by using dermatology quality life index

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ABSTRACT

Background: The goal of the study was to assess the prescribing pattern, pattern of skin diseases among the patients and to assess the impact of quality of life in various Skin diseases of dermatological patients by using dermatological quality life index (DLQI). The present study aims at improving the patient's knowledge towards their disease and medication and also to measure the improvement of Quality of life of patients.
Methods: A prospective observational study was carried out for a period of six months at Department of Dermatology Basaveshwara Medical College and Hospital, Chitradurga.
Results: Total 150 patients are included. 58 was males and 92 were females. The most skin disease is seen in the age group of 21-40 (40.7%). Majorly skin disease are seen in the illiterate people is (62%), (70.7%) married and 15.3% of socio-economic status of the patients. The major skin disease are seen in the study are psoriasis (12.66%), scabies (16.66%), dermatitis (9.33) and followed by urticaria (6.66%), eczema (4.66%), acne (5.33%). Anti-histamines (16.6%), emollients (9.33%), corticosteroids (9.33%), anti puritics (6.66%), kerotolyte (6.66%) are majorly prescribed drugs. The study showed that there was an extremely significant improvement in DLQI of patients in comparison with first visit result and follow up visit. Whose P value is (<0.001) extremely significant.
Conclusions: Therefore the pharmacist patient education found to have significant influence on improves the patient knowledge towards their disease and medication which shows the positive impact on quality of life among the patients of skin diseases.

Keywords: Dermatology, Prescribing pattern, Dermatology quality of life index, Quality of life

INTRODUCTION

Skin diseases in developing countries have a serious impact on people's quality of life and bring out significant burden to the nations. It affects more than 60% of the general population. The prevalence of skin disease in any region or country depends on various factors such as genetics, racial constitution, social and hygienic standards, customs and occupations.

Skin disease are major causes of morbidity due to the presence of physical symptoms as they can cause anxiety, depression, anger and embarrassment, which lead to social isolation and absenteeism at work and school. Also skin disease are extremely frequent and may be affect quality of life.[1]

The treatment of dermatological patients usually focuses on clinical signs and symptoms. The dermatology life

quality index is one of the quality of life questionnaires which is specifically designed for skin disease.[2]

The effect of the skin disease on patients' lives may be profound but are not well understood. For example, the nature of these effects, their relationship with each other and to clinical variable.[3]

The concept of health-related quality of life is gradually expanding in both scope and importance in medical care. Basically, it consists of a constellation of information about an individual's physical, social and psychological well-being. It also defines treatment effectiveness by focusing on the ability of an individual to lead a productive and enjoyable life. DLQI also describes the burden of disease in terms of importance of the patient's day-to-day life as well as the burden to society.[6]

The dermatology life quality index (DLQI) is one of the quality-of-life questionnaires that is specifically designed for skin diseases and can be used both to measure quality of life and to compare it with that found in other cutaneous diseases.[4]

Use of drugs in some skin disease conditions may be contraindicated for example drugs like antimalarial, NSAIDS, beta blockers are contraindicated in psoriasis and sulfonamides and sulphadiazinn are contraindicated in scabies.[5]

WHO defines QOL as the individual's perception of their position in the context of culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. Measurement of QOL is done with reliable questionnaires like dermatology life quality index (DLQI), acne disability index (ADI) and cardiff acne disability index (CADI).[6]

Assessing quality of life of patients with better service, by acknowledging their real needs and interfering with treatment decisions. There are effective therapies for Acne and administration of these agents can cause an improvement in quality of life and psychological health. Increased awareness and early intervention for the psychological and psychiatric sequelae of Acne can benefit the patients.[7]

Therefore, the assessment of the prescribing pattern and the quality of life can help to provides better patient care.

METHODS

Study design

This was a prospective observational study.

Study site

The study will be conducted on out-patient of dermatology department of Basaveshwara Medical College & Hospital, Chitradurga.

Study period

The study was conducted over a period of six months from November 2015 to April 2016.

Study subjects

This study will include hospital out-patients treated in Dermatology department for various diseases. Patient who meets the following criteria will be enrolled.

Inclusion criteria

Inclusion criteria were patient's age 1-80 years; patients who are willing to give inform consent.

Exclusion criteria

Exclusion criteria were all in-patients; out-patients of age above 80 years.

Ethical approval

The study was approved by the Institutional Ethical Committee of Basaweshwara Medical College Hospital and Research Centre, Chitradurga.

Vide number: SJMCP/IEC/19/2015-2016(Annexure-1).

Sources of data

- Medical records of In-patients
- Medical records of the patients.
- Patient /care taker interview.

Study procedure

The study will be started after obtaining the institutional ethical committee (IEC). Patients who satisfy above study criteria will be included into the study after taking the consent. Patient's demographic details, medication history and therapeutic category will be collected from the medical records of the patient and will be documented in a suitably designed data collection form. Answers for DLQI questionnaires will be obtained from enrolled patients. The obtained data will be analyzed by using student T test statistical method.

RESULTS

Demographic profile of the patients

It is a Prospective Observational study for a period of 6 months. A total of 150 patient's aged 13-80 years data were collected in Dermatology department in which 150 are outpatients. Among the whole 60 were males and 90 were females. The results are shown in Table 1.

Table 1: Distribution according to gender.

Gender	Number of patients	% of patients
Female	92	61.3
Male	58	38.7
Total	150	100.0

Distribution of patients according to age group

In this study, patients were divided into four groups based on different age. Out of 150 patients 42 were from 1-20 years followed by 61 were from 21-40 years, 34 were from 41-60 years and 13 from >60 years respectively. The results are shown in Table 2.

Table 2: Distribution according to age group.

Age	Number of patients	% of patients
1-20	42	28.3
21-40	61	40.7
41-60	34	22.6
60 above	13	7.7

Distribution according to medical history

In this study 2 patients have a past medical history and no patients are having past medication history and no social history and no family history in this study.

Distribution according to education (n=100)

In this study population among 150 patients 35 members were degree, 93 were illiterate 9 were PUC, 13 up to 10th class. The Results are shown in Table 3.

Table 3: Distribution of patients according to education.

Education	No of patients	% of patients
Degree	35	23.3
PUC	9	6.0
Up to 10th	13	8.7
Illiterate	93	62.0
Total	150	100.0

Distribution according to marital status

In this study population among 150 patients 106 members were married, 44 were unmarried. The Results are shown in Table 4.

Table 4: Distribution of patients according to marital status.

Marital Status	No of patients	%of patients
Married	106	70.7
Unmarried	44	29.3
Total	150	100

Distribution according to social economics

In this study population among 150 patients 10 members were 10,000-30,000, 23 were 31,000-50,000, 7 were 51,000-70,000, 10 were more than 70,000, 100 were Nil. The results are shown in Table 5.

Table 5: Distribution of patients according to social economics status.

Social economic status (1year)	No of patients	% of patients
10,000-30,000	10	6.6
31,000-50,000	23	15.3
51,000-70,000	7	4.6
More than 70,000	10	6.6
NIL	100	66.6

Table 6: Distribution of patients according to diseases.

Disease	Number of cases	% of diseases
Acne	8	5.33
Psoriasis	19	12.66
Dermatitis	14	9.33
Urticaria	10	6.66
Cutaneous vasculitis	1	0.66
Miliria	2	1.33
Steven johnson syndrome	2	1.33
Aiopee	1	0.66
Eczema	7	4.66
Erythema muktiforme	4	2.66
Bendi dermataly syringoma	1	0.66
Type 11 leprosy	2	1.33
Scabies	2	16.67
Vitiligo	2	1.33
Lichen simplex chronicus	5	3.33
Pmle	1	0.66
Hypoproteimine pruritis	2	1.33
Keratosis pilent	2	1.33
Lichen pain	5	3.33
Lucoderma	1	0.66
Malesma	5	3.33
Seboria	4	2.66
T.captis	2	1.33
Mycetoma left foot	1	0.66
T. inioginlise	2	1.33
T. corpis	1	0.66
Others	21	14
Total	150	100

Distribution of patients according to diseases

In this study population 5.33% were acne, AND 12.66% had psoriasis followed by 9.33% dermatitis, 6,66% urticaria, 0.60% cutaneous vasculitis, 1.33% miliria,

1.33% Steven John-son syndrome, 0.66% alopee, 4.66% eczema, 2.66% erythema multiforme, 0.66% bendi dermataly syringoma, 1.33% leprosy, 16.66% scabies, 1.33% vitiligo, 3.33% lichen simplex chronicus, 0,66% pmle, 1.33% hypoproteimine pruritis, 1.33% keratosispilent, 3.33% lichen pain, 0.66% lucoderma, malesma 3.33%, seboria 2.66%, 1% *T. Captis*, 1.66% *T. Inioginlise,* 0.66% *T. Corpis,* 14% Others.

Distribution of patients according to class of drugs

In this study population 16.6% were anti histamines, 8% were insecticidal, 9.33 emollients, 9.33% were corticosteroids, 8% tropical steroids, 2.66% were H_2 antagonist, 2% were sulfonamide, 6.66% were antipruritics, 5.33% were NSAIDS, 0.66% were proton pump inhibitor, 6.66% were antibiotics, 8% kerotolyte, 6.66% were antifungal, 2% were cephalosporins, 1.33% were xanthenes derivates, 5.33% were vitamines, 0.66% were benzodiazipines, 0.66% were retiniods.

Distribution according to dermatology quality of life (DLQI)

Among the 150 patients, the first visit of mean value is 6.73, Standard deviation is 3.483, Minimum score is 0 and Maximum score is 14 and in second visit the mean value is 3.69, standard deviation is 2.647, minimum score is 0 and maximum score is 10. Student T test is used for analyzing the data. It shows t value is 8.51 and p value is <0.001 which shows statistically significant.

Table 7: Distribution of patients according to class of drugs.

Class of drug	Number of patients	% of drugs
Anti-histamines	25	16.6
Insecticidal	12	8
Emollients	14	9.33
Corticosteroids	14	9.33
Topical corticosteroids	12	8
H_2 antagonist	4	2.66
Sulfonamides	3	2
Anti pruritics	10	6.66
Nsaids	8	5.33
Proton pump inhibitor	1	0.66
Antibiotics	10	6.66
Keratolytics	12	8
Anti-fungal	10	6.66
Cephalosporins	3	2
Xanthine derivatives	2	1.33
Vitamins	8	5.33
Benzodiazepines	1	0.66
Retinoids	1	0.66
Anti-bacterial	1	0.66

Table 8: Distribution according to dermatology quality of life (DLQI).

DLQI	First visit	Follow up
Mean	6.73	3.69
Std. deviation	3.483	2.647
Minimum	0	0
Maximum	14	10
T value	8.51	
P value	<0.001	

DISCUSSION

Skin diseases in developing countries have a serious impact on people's quality of life and bring our significant burden to the nations. It affects more than 60% of the general population.

In the present study a total 150 patients were included out of which 58 were males and 92 were females. The most skin disease is seen in the age group of 21-40 (40.7%). Majorly skin disease are seen in the illiterate people is 93 (62%), 106 patients were (70.7%) married and 23 patients (15.3%) of socio economic status of the 31,000-80,000 per month The major skin disease are seen in the study are psoriasis (12.67%), scabies (16.67%), dermatitis (9.33) and followed by urticaria (6.67%), eczema (4.67%), acne (5.33%). anti-histamines (16.6%), emollients (9.33%), corticosteroids (9.33%), anti puritics (6.66%), kerotolyte (6.66%) are majorly prescribed drugs.

A study conducted by Juno J. Joel on pattern of skin disease and prescribing trends in rural India shows 191 were males and 201 were females among the 400 population. The majority of the patients were in the age group of 21-30 years. The prevalence of allergic skin disease was found to be highest which includes eczema 66 (16.5%), followed by dermatitis 59 (14.5%), urticaria 30 (7.5%) and polymorphic light eruption 19 (4.75%). The second most were the fungal infections. Tinea infections (10.25%) constitute the most common which include T. incognito, *T. Corporis, T. Cruris, T. vulgaris. P. Versicolour* followed by intertrigo (2.75%). In sebaceous hair follicles disorders, acne and alopecia were identified. The common prescribed drugs were antihistamines (25.6%) followed by antifungal (24.5), antibiotics (15%) and corticosteroids (12.5%).[8]

The current study showed a (marked) extremely significant (P value <0.001) improvement in the quality of life DLQI of patients in comparison with first and follow up visit with mean of 6.73 and 3.69 respectively.

Maria RCS conducted a on impact on the quality of life dermatology patients in southern Brazil. The result shows a median of 7 and a mean 7.7 (SD=5.0) were obtained with the dermatology quality life index. The skin diseases with higher scores on the dermatology life quality life

index were psoriasis (median =15.5), vitiligo (median =13), atopic dermatitis (median =12) and acne (median =10).[9]

CONCLUSION

According to the analyzed results and from view of literature, the conclusions made are; skin disease in one of the major health issue which affects the daily livelihood of human kind. Assessment of drug usage and quality of life will bring awareness with respect to diseases and improve the quality of life. So such studies should be carried out on continuous basic.

Limitations

- Sample Size was low due to less duration for study.
- The follow up and patient counselling for various skin disease patients are limited for single time.
- Only out patients were included in the study.
- Lack of patient interest.
- Patient consulting one or more hospitals.

Future directions

- Large sample size will give accurate result.
- Conduction of Study for longer duration of time provides better results.
- Inpatients can be involved for the betterment of the study.
- Creating awareness among the patients and patient representatives regarding the disease and medications in the successive follow-up.

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