

Original Research Article

Profile of Dermatological Diseases in Patients Presenting at an Urban Health Care Center of Dehradun

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Abstract

Background: Skin diseases are one among the leading group of diseases encountered in the community and prevalence of skin diseases varies from region to region in our country.

Aim: To study the profile of skin diseases among patients presenting at an urban health care center of Dehradun.

Materials and methods: A prospective data was collected from Khurbura, an urban health center of Shri Guru Ram Rai Institute of Medical and Health Sciences (SGRRIMHS), Shri Mahant Indires Hospital (SMIH), a tertiary care center in Dehradun, Uttarakhand, India, from January 2018 to December 2018 in the Department of Dermatology, Venereology and Leprology. A total of 998 patients were analyzed in this study.

Results: A total of 998 patients were enrolled in our study. Skin diseases were more common in women, with female (564): male (434) ratio of 1.3:1. Maximum number of patients was in the age group of 25 to 34 years. Working man (30.26%) and housewives (18.03%) constituted major proportion. Scabies (20.34%) followed by tinea cruris (18.03%) were the most common skin diseases in our study. But tinea cruris was found to be the most common skin disease in males and melasma in females.

Conclusion: Skin diseases like scabies, tinea cruris, melasma, tinea corporis and allergic contact dermatitis were commonly seen in our study. Proper health education and public awareness regarding the diseases help us to manage this problem rationally.

Key words

Urban health center, Prevalence, Dermatological diseases, Scabies, Tinea corporis, Tinea cruris, Melasma, Allergic contact dermatitis.

Introduction

Skin is the largest organ of the body with the surface area of two square yards. It forms an active boundary between the internal organs and outer world. The look of skin and its related structures majorly affects the body image, which is extremely rooted within the cultures of any social group [1]. Skin diseases are universally common in a population and cause significant economic burden. Some of the skin diseases are completely harmless, while others can be warning signs of more serious medical condition. The development of skin diseases is influenced by external factors, such as geographic region, climate, socioeconomic status, and personal habits, and internal factors, such as age, gender, and heredity [2]. The lower standards of hygiene and the climate are crucial factors for the increasing incidence of skin diseases. Moreover, they are affected by the quality of the accessible medical care [3]. So, the pattern of skin diseases differs from region to region as a result of these factors. The prevalence of skin diseases in the general population has varied from 7.86% to 11.16% in various studies [4, 5].

Skin diseases are one of the three common causes of morbidity in the developing countries like India along with malaria and diarrhea [5]. Improvement in the standard of living, education of the general public, improvement in the environmental sanitation, and good nutritious food may help to bring down the skin diseases

[6]. This study was done in the urban health center of Shri Mahant Indires hospital which is located in the Khurbura locality situated 648 meters above sea level to find out the pattern of various dermatological diseases.

Materials and methods

Aim: To study the profile of various skin diseases among patients attending an urban health care center of Dehradun.

Study design: This study was conducted under the Department of Dermatology, Venereology and Leprology at an urban center of Shri Guru Ram Rai Institute of Medical and Health Sciences, Shri Mahant Indires Hospital (SGRRIMHS, SMIH), in Dehradun, Uttarakhand, India, between January 2018 to December 2018. This urban health center is located at Khurbura, Dehradun.

Study population

Inclusion criteria: All patients who attended the center from January 2018 to December 2018 were included in this study.

Exclusion criteria: Individuals who were not willing to provide consent for participation in this study were excluded.

Consent: An informed consent was taken from all the patients.

Evaluation: This study involved analysis of data collected from patients attending urban health

center from January 2018 to December 2018. All the patients were diagnosed on the basis of history, clinical examination and relevant laboratory tests and skin biopsy was done in required cases. Data regarding age, sex, occupation, chief complaints with duration, site of lesions, associated symptoms, and progression of the disease was taken. A complete head to foot examination was performed in a private room in day light. The studied cases were further divided on the basis of type of skin lesions into bacterial, viral, fungal and parasitic infections, dermatitis, pigmentary disorders, appendageal disorders, papulosquamous disorders, immunobullous disorders, benign skin tumors, hair disorders, oral lesions and other skin diseases.

Results

In a total of 998 patients enrolled, 66 dermatological diseases were diagnosed. A total of 434 patients were males and 564 were females. Females outnumbered males with female: male ratio of 1.3:1. The age at presentation ranged from 3 to 74 years and maximum numbers of patients were in the age group of 25 to 34 years. The mean age at presentation for male and female patients was 26 and 28 years, respectively. The age and sex distribution were as per **Table - 1**.

Table - 1: Age and Sex distribution of 998 patients.

Age (in years)	Males	Females
0-4	5	3
5-14	34	29
15-24	66	110
25-34	171	229
35-44	88	79
45-54	35	49
55-64	25	56
≥ 65	10	9

Service men constituted major proportion among males and housewives (18.03%) constituted major proportion among females. The duration of disease varied from 1 month to 3 years with majority of the patients 592 (59.31%) having duration less than six months (**Table – 2**).

Table – 2: Epidemiological profile of 998 patients.

Feature	No. of patients	%
Sex		
Male	434	43.48
Female	564	56.51
Age distribution (in years)		
0-4	8	0.80
5-14	63	6.31
15-24	176	17.63
25-34	400	40.08
35-44	167	16.73
45-54	84	8.41
55-64	81	8.11
≥ 65	19	1.90
Duration of disease		
< 6 months	592	59.31
6-month -1 year	204	20.44
1 -2 year	126	12.62
2 -3 year	76	7.61

Table – 3: Percentage of Various Skin Diseases.

Diseases	No. of patients	%
Infections and parasitic diseases		
Fungal infections		
Tinea corporis	90	9.01
Tinea cruris	180	18.03
Tinea capitis	15	1.50
Tinea pedis	10	1.00
Tinea manuum	5	0.50
Onychomycoses	2	0.20
Pityriasis versicolor	15	1.50
Candidiasis	8	0.80
Viral infections		
Viral warts	30	3.00
Herpes zoster	5	0.50
Herpes simplex	7	0.70
Molluscum contagiosum	10	1.00
Parasitic infestations		
Scabies	203	20.34
Pediculosis	4	0.40
Bacterial infections		
Impetigo	5	0.5
Folliculitis	2	0.2
Furuncle	3	0.3
Cutaneous tuberculosis	2	0.2
Papulosquamous disorders		

Psoriasis	5	0.50
Lichen planus	8	0.80
Parapsoriasis	3	0.30
Lichen amyloidosis	2	0.20
Immunobullous disorders		
Pemphigus vulgaris	1	0.1
Dermatitis herpetiformis	1	0.1
Skin disorders of appendages		
Acne	50	5.01
Rosacea	2	0.20
Alopecia aerate	10	1.0
Androgenic alopecia	18	1.8
Telogen effluvium	4	0.40
Dermatitis and eczema		
Allergic contact dermatitis	56	5.61
Irritant contact dermatitis	8	0.80
Lichen simplex chronicus	5	0.50
Atopic dermatitis	3	0.30
Seborrheic dermatitis	14	1.40
Prurigo nodularis	2	0.20
Pruritis	3	0.30
Radiation related disorders of skin		
Photodermatitis	8	0.8
Polymorphous light eruption	8	0.8
Sunburn	2	0.2
Actinic keratoses	1	0.1
Urticaria and erythma		
Urticaria	17	1.7
Erythema nodosum	1	0.1
Erythema multiforme	1	0.1
Pigmentary disorders		
Melasma	102	10.22
Vitiligo	5	0.5
Freckles	2	0.2
Post-inflammatory hypopigmentation	2	0.2
Benign and malignant neoplasms		
Seborrheic keratoses	1	0.1
Cherry angioma	1	0.1
Skin tag	1	0.1
Lipoma	1	0.1

Disorders of oral cavity		
Oral lichen planus	1	0.1
Geographical tongue	1	0.1
Recurrent oral apthae	2	0.2
Cheilitis	4	0.4
Neurological disorders		
Leprosy	2	0.2
Meralgia paresthesia	1	0.1
Congenital disorders		
Ichthyosis	5	0.5
Neurofibromatosis	1	0.1
Other skin diseases		
Callus	12	1.2
Drug reaction	2	0.2
Keloid	5	0.5
Acanthosis nigricans	2	0.2
Palmoplantar keratoderma	2	0.2
Xerosis	12	1.2
Keratoses pilaris	2	0.2

After analyzing the collected data, it was found that most commonly observed disease groups were mycoses (32.56%), parasitic infestations (20.74%), pigmentary disorders (11.12%), eczema and dermatitis (9.10%) and disorder of skin appendages (8.41%) as per **Table - 3**. In our study, scabies was the most commonly seen skin lesion observed in 203 patients (20.34%), out of which 111 patients (54.67%) were males and 92 patients (45.32%) were females. Tinea cruris was the second most common skin lesion as observed in 180 patients (18.03%), out of which 114 patients (63.33%) were males and 66 patients (36.66%) were females. Melasma was seen in 102 patients (10.22%), out of which 8 patients (7.84%) were males and 94 patients (92.15%) were females as per **Table - 4**.

Discussion

This study carried out at an urban health center of a tertiary hospital showed that skin diseases are not infrequent. In our study, females outnumbered the males with a ratio of 1.3: 1. Increased female percentage is mainly because of more cosmetic concern among females than

males. A previous study conducted at Wardha also showed female predominance (55.7%) of dermatological disorders [6]. Majority (40.08%) of the patients in our study were in the age group of 25 to 34 years which is in consistence with another study conducted by Kouotou E A, et al. [7] which showed majority of patients were in the age group of 21 to 40 years (69.1%).

Majority of the patients belonged to young and middle age group. This observation could be partially explained by the fact that people in this age group are highly mobile, so they have easy access to health care facilities as well as have more chances of spreading the infections to others.

Table – 4: Sex Distribution of Commonly observed Skin Disorders.

Diseases	Males	Females	Total
Scabies	111(54.67%)	92 (45.32%)	203
Tinea cruris	114(63.33%)	66(36.66%)	180
Tinea corporis	25(27.77%)	65 (72.22%)	90
Melasma	8(7.84%)	94(92.15%)	102
Allergic contact dermatitis	34 (60.71%)	22(39.28%)	56
Acne	12(24.00%)	38 (76.00%)	50
Warts	8 (26.66%)	22(73.33%)	30
Androgenic alopecia	18 (100.00%)	0	18
Urticaria	13 (76.47%)	4(23.52%)	17
Pityriasis versicolor	7 (46.66%)	8(53.33%)	15
Tinea capitis	9(60.00%)	6 (40.00%)	15
Seborrheic dermatitis	8(57.14%)	6 (42.85%)	14
Alopecia areata	5(50.00%)	5(50.00%)	10
Tinea pedis	4(40.00%)	6(60.00%)	10
Molluscum contagiosum	6(60.00%)	4(40.00%)	10
Lichen planus	4(50.00%)	4(50.00%)	8
Irritant contact dermatitis	6(75.00%)	2(25.00%)	8
Polymorphous light eruption	2(25.00%)	6 (75.00%)	8
Photodermatitis	4 (50.00%)	4(50.00%)	8
Herpes simplex	2 (28.57%)	5 (71.42%)	7

Parasitic diseases were identified in 20.74 % of our patients and among this, Scabies (20.34%) was most commonly found. Similarly, higher rate of scabies was found in the study conducted by and Kouotou E A, et al. (41.00) and Mahe A, et al. (16.60%) [7, 8]. However, study from Japan found the lower prevalence of scabies (0.15%) [9] as compared to our study. This difference in prevalence is because of community life conditions and non-compliance with hygiene practices seen in our part of the world as compared to developed countries. Overcrowding could be attributed as one of the risk factors for the spread of Scabies. The prevalence of mycoses was 32.54 % in our study which mainly increased during summer. While the reported prevalence of fungal diseases was comparatively lower in the study conducted by

Fatini MI, et al. and Lal Khatri M, et al. [10, 11], prevalence similar to our study was found in the study conducted by Mahe A, et al. [8]. Higher rates were mainly found in hot and humid areas. Among fungal diseases, tinea cruris and tinea corporis were the most commonly observed skin diseases among 180 patients (18.03%) and 90 patients (9.01%) respectively. Studies performed in Yemen and Iran found pityriasis versicolor as leading cause of fungal diseases [11, 12]. This difference might be due to climatic differences between two regions. Moreover, community life standards and poor hygiene also influence the outcome of disease. Pigmentary disorders constituted 11.12% in our study whereas an older study showed prevalence of pigmentary disorders around 5.1% [6]. Higher rates of pigmentary disorders in our study might be due to more

female attendance in the center. Dermatitis and eczema (9.11%) were fourth commonly found disease group in our study however, previous studies conducted by Fatani MI, et al.; Lal Khatri M, et al.; and AL Samarai, et al. [10, 11, 13] found higher prevalence of same. Allergic contact dermatitis was commonly seen in our study and reason behind this might be indulgence in agricultural and manual work in our part of the world. Acne which is a common skin disease affecting susceptible pilosebaceous follicles was observed in 5.01% of our patients. Earlier studies from Iran and turkey showed higher prevalence of acne of about 19.4% [12, 14]. Higher rates were observed in developed countries because of psychological and emotional stress associated with this condition. Warts were found among (3.0%) patients in our study which was almost similar to the prevalence observed in the study conducted by Bilgili, et al. (4.1%) [14].

Conclusion

Skin diseases are very commonly encountered in the community. Population based studies should be performed to reliably define the prevalence of skin diseases. However, studies evaluating OPD visits to hospital outpatient clinics also provide valuable information about the prevalence of skin diseases. Our study has revealed that most skin diseases in urban health center, such as scabies, tinea corporis, tinea cruris, melasma and allergic contact dermatitis are preventable and predominantly affect individuals in the highly productive age group. Appropriate health education is vital in combating their spread, reducing the associated morbidity, and improving the health status of the population. Furthermore, a dedicated effort should be made at all levels of healthcare to train health workers in the diagnoses and treatment of the more common dermatological conditions.

References

1. Alam M, Dover J. On beauty, evolution, psychosocial considerations and surgical enhancement. *Arch Dermatol.*, 2001; 137: 795-807.

2. Basti BD, Radhakrishnan S. Prevalence of dermatological manifestations among the tribal school children of South India. *Int J Community Med Public Health*, 2016; 3: 1957-62.
3. Abdel-Hafez K, Abdel Aty M, Hofny E. Prevalence of skin diseases in rural areas of Assuit Governorate, upper Egypt. *Int J Dermatol.*, 2003; 42: 887-92.
4. Grover S, Ranyal RK, Bedi MK. A cross section of skin diseases in rural Allahabad. *Indian J Dermatol.*, 2008; 53: 179-81.
5. Rao GS, Kumar SS, Sandhya. Pattern of skin diseases in an Indian village. *Indian J Med Sci.*, 2003; 57: 108-10.
6. Jain S, Barambhe M S, Jain J, Jajoo U N, Pandey N. Prevalence of skin diseases in rural Central India: A community based, cross sectional, observational study. *J Mahatma Gandhi Inst Med Sci [serial online]*, 2016[cited 2019 Jan 30]; 21: 111-5.
7. Kouotou E A, et al. Skin Diseases Among Sub-Saharan African Prisoners: The Cameroonian Profile. *Int J Clin Dermatol Res.*, 2014; 2(7): 40-43.
8. Mahe' A, Cisse' IAH, Fayo O, N' Diayne HT, Niamba P. Skin diseases in Bamako (Mali). *Int J Dermatol.*, 1998; 37: 673-676.
9. Furue M, Yamazaki S, Jimbow K, Tsuchida T, Amagai M, Tanaka T, Matsunaga K, Muto M, Morita E, Akiyama M, Soma Y, Terui T, Manabe M. Prevalence of dermatological disorders in Japan: a nationwide, cross-sectional, seasonal, multicenter, hospital based study. *J Dermatol.*, 2011; 38: 310-320.
10. Fatani MI, Al-Afif KA, Hussain H. Patterns of skin diseases among pilgrims during Hajj season in Makkah, Saudi Arabia. *Int J Dermatol.*, 2000; 39: 493-96.
11. Lal Khatri M. Spectrum of skin diseases in Yemen (Hajjah and adjacent region). *Int J Dermatol.*, 2004; 43: 580-585.

12. Baghestani S, Zare S, Mahboobi AA. Skin diseases patterns in Hormozgan, Iran. *Int J Dermatol.*, 2005; 44: 641-645.
13. AL Samarai AG. Prevalence of skin diseases in Iraq: a community-based study. *Int J Dermatol.*, 2009; 734-739.
14. Bilgili ME, Hamza Y, Gulben S. Prevalence of skin diseases in a dermatology outpatient clinic in Turkey. *J Dermatol Case Rep.*, 2013; 4: 108-112.