DOI: 10.14260/jemds/2015/1433

ORIGINAL ARTICLE

PREVALENCE OF SKIN DISEASES IN A DERMATOLOGY OUTPATIENT CLINIC IN RIMS, KADAPA, A CROSS-SECTIONAL, RETROSPECTIVE STUDY

N. L. Sirisha[1], M. Pavan Kumar[2], S. Sowjanya[3]

HOW TO CITE THIS ARTICLE:
N. L. Sirisha, M. Pavan Kumar, S. Sowjanya. "Prevalence of Skin Diseases in a Dermatology Outpatient Clinic in RIMS, Kadapa, a Cross-Sectional, Retrospective Study". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 57, July 16; Page: 9903-9909, DOI: 10.14260/jemds/2015/1433

ABSTRACT: BACKGROUND: Dermatological diseases vary widely as a result of geographic location climate socioeconomic status and personal habits and internal factors such as age gender and heredity. **OBJECTIVE:** The aim of the study was to determine the main causes for outpatient visits in dermatology outpatient clinic in RIMS Kadapa. **MATERIALS AND METHODS:** The outpatient clinic records of the department of dermatology RIMS Kadapa, dated between 1st March 2014 to 1st March 2015 were retrospectively assessed. Patients were grouped according to age, gender, and clinical diagnosis. **RESULTS:** A total of 8,545 new patients with 9,416 skin problems were included in the study. The study group was 52.3% female and 47.7% male. The age range was between 1 and 99 years. The most commonly encountered diseases were: contact dermatitis (11.7% of patients), scabies (8.9%), fungal infections (8.9%), urticaria (6.0%), acne (4.4% each). **CONCLUSION:** It appears that certain skin diseases contact dermatitis, scabies, fungal infections, urticaria, and acne causes serious health problems. Public health policies should be implemented in order to manage these problems rationally.

KEYWORDS: Acne, Contact dermatitis, Dermatophytosis, Prevalence, Scabies, Urticaria.

INTRODUCTION: Skin diseases, which are commonly encountered in the community, are an important disease group in healthcare units.[1] The development of skin disease is influenced by external factors, such as geographic region, climate, socioeconomic status, and personal habits, and internal factors, such as age, gender, and heredity. The prevalence of skin diseases varies from one country to another country and in various regions within the same country.[2]

Dermato-epidemiology refers to study of the epidemiology of dermatological disorders.[3] One of the need assessments in dermatology is to establish the size and nature of the dermatological needs based on epidemiological data. Epidemiology is often used to describe the distribution, causes and burden of diseases in human population. It also helps health service planners.

The definition of skin disease prevalence is important in planning therapeutic and preventive healthcare services. The ideal method for prevalence studies is the use of population based studies. However, many studies have been performed by examining the hospital application records of patients.

Three skin conditions, fungal skin diseases, other skin and subcutaneous diseases, and acne were in the top 10 most prevalent diseases worldwide in 2010.[4] There are numbers of people in India suffering from common skin problems. They are found in children, young and adults as well as in old persons. The common skin problems are Acne, Burn scars, Hyperhidrosis, Psoriasis, Scabies, Skin grafting, Vitiligo, Pediculosis, Herpes simplex infection, Varicella, Herpes Zoster, Erythema, Urticaria etc.[5] Most of the skin diseases are not notifiable diseases in the World. Therefore information on the frequency of skin diseases is limited.

DOI: 10.14260/jemds/2015/1433

As pattern of skin diseases varies in different parts of India we decided to undertake a retrospective analysis of skin disease as observed in Kadapa. This is original study, because this study was performed on the new patients who attended to dermatology outpatient clinics in the certain period of time

OBJECTIVE: The aim of the study was to determine the prevalence of skin diseases and their distribution according to age and gender.

MATERIALS AND METHODS: In this study, the outpatient clinic records of the Dermatology department of Rajiv Gandhi institute of medical sciences Government college dated between 1st March 2014 to 1st March 2015, were retrospectively assessed. Cases with the doubtful diagnosis were excluded from the study. Diagnosis was made on clinical grounds and laboratory investigations were done whenever required.

RESULTS: A total of 8545 new patients were included in the study who were attended the dermatology outpatient clinic in RIMS Kadapa dated between 1march 2014 to 1march 2015. Out of the 8545 patients, 4469(52.3%) were female, and 4076(47.7%) were male (male/female=0.91). The greatest number of patients were (n=1870; 21.8%) was present in the 20-29 years of age group, while 1474 patients (17.1%) were 10-19 years of age and 1255 patients (14.6%) were 0-9 years of age. These three age groups constituted 53.5% of the total number of patients. The distribution of cases according to age and gender are given in table 1.

The most commonly encountered disease groups were dermatitis and eczema (244.4%), mycoses (13.8%) and parasitic disease (10.14%). These three disease groups constituted 48.34% of the observed cases. The frequencies and rates of the diseased groups are shown in table 2.

The three most commonly encountered diseases were contact dermatitis (11.7%), scabies (8.9%), dermatophytosis (8.9%). Urticaria (6%), acne (4.4%), atopic dermatitis (3.7%), lichen simplex chronicus (3.3%), furuncle carbuncle and cutaneous abscess (3.2%) followed. Hansen's disease formed 0.55% of total cases. Vesiculobullous disorders formed only 0.3% of the cases, out of which pemphigus group (0.2%) followed by bullous pemphigoid (0.09%). The distribution of 5 common diseases in this study is shown in table 3 according to gender. Age distribution of some common skin diseases are shown in table 4.

DISCUSSION: Rajiv Gandhi institute of medical sciences hospital contains 650patient beds with 170 specialists working in different branches. The majority of the patients attending to the dermatology clinic outpatient in RIMS were from rural areas. The most commonly encountered diseases diagnosed in the study were dermatitis and eczema (24.4%). Dermatitis and eczema were the most commonly encountered skin diseases in previous studies conducted in India[6-11] USA[12] and England[13] The most commonly encountered disease in this disease group is contact dermatitis. Agriculture workers (Phytophotocontact dermatitis), occupational exposure to substances like cement, chemicals etc. are the responsible factors for contact dermatitis to become most common disease. The incidence of contact dermatitis is more in men (53.4%) in our study compared to study in turkey (42.7%),[14] this may be due to occupational differences from region to region. Contact dermatitis was more common in the age group 20-29yrs whereas the incidence was more in 30-39yr age group in turkey study.

DOI: 10.14260/jemds/2015/1433

Age(yr)	Male (n)	%	Female (n)	%	Total (n)	%
0-9	676	7.9	579	6.7	1255	14.6
10-19	657	7.6	817	9.5	1474	17.1
20-29	911	10.6	959	11.2	1870	21.8
30-39	475	5.5	680	7.9	1155	13.4
40-49	414	4.8	704	8.2	1118	13
50-59	355	4.1	381	4.4	736	8.5
60-69	445	5.2	319	3.7	764	8.9
>70	143	1.6	30	0.3	173	1.9
Total	**4076**	**47.7**	**4469**	**52.3**	**8545**	**100**

Table 1: The distribution of cases according to age and gender

Diseases	Patients	%
Infectious and parasitic diseases	**2720**	**28.8**
Mycoses	**1301**	**13.8**
Dermatophytosis	841	8.9
Pityriasis versicolor	260	2.7
candidiasis	200	2.1
Viral infections	**464**	**4.9**
Viral warts	146	1.5
Herpes zoster	178	1.8
Herrpes simplex infections	108	1.1
Moluscum contagiousum	32	0.33
Parasitic diseases	**955**	**10.14**
Scabies	843	8.9
Pediculosis	112	1.1
Neoplasams	**204**	**2.1**
Malignant neoplasm	34	0.3
Benign neoplasm	**170**	**1.8**
Melanocytic naeevi	102	1
Other benign neoplasm of skin	68	0.72
Diseases of the oral cavity, salivary glands and jaws	**74**	**0.78**
Recurrent oral apthae	51	0.54
cheilitis	**23**	0.24
Diseases of the skin and subcutaneous tissues		
Infections of the skin and subcutaneous tissue	**764**	**8.1**
Cutaneous abscesses, furuncle, carbuncle	304	3.2
Impetigo	172	1.8
Cellulitis	62	0.65
Pyoderma	181	1.9
Erythrasma	45	0.4
Bullous disorders	**34**	**0.3**
Pemphigus	20	0.2
Bullous pemphigoid	9	0.09
Dermatitis herpetiformis	5	0.05
Dermatitis and eczema	**2303**	**24.4**
Contact dermatitis	1105	11.7
Lichen simplex chronicus	320	3.3

DOI: 10.14260/jemds/2015/1433

Atopic dermatitis	350	3.7
Seborrhoeic dermatitis	178	1.8
Prurrigi nodularis	270	2.8
Pruritus	80	0.84
Papulosquamous disorders	**676**	**7.1**
Psoriasis	278	2.9
Lichen planus	148	1.5
Pityriasis rosea	124	1.3
Other papulosquamous disorders	126	1.3
Urticaria and erythema	**639**	**6.7**
Urticaria	565	6
Erythema nodosum	33	0.3
Erythema multiforme	27	0.2
Other erythematous condition	14	0.1
Radiation related disoreders of skin	**246**	**2.6**
Polymorphous light eruption	246	**2.6**
Skin disorders of appendages	**850**	**9**
Acne	420	4.4
Alopecia aerate	118	1.2
Androgenetic alopecia	94	0.99
Hirsutism	18	0.19
Rosacea	25	0.2
Miliaria rubra	175	1.8
Other disorders of skin and subcutaneous tissue	**829**	**8.8**
Callus	82	0.8
Melasma	210	2.2
Other disorders of pigmentation	66	0.7
Vitiligo	275	2.9
Dermatosis papulosa nigra	30	0.3
Lupus erythematosus	36	0.38
Other disorders, not elsewhere classified	130	1.38
Congenital malformations, deformations and chromosomal abnormalities	**25**	**0.26**
Neurofibromatosis	17	0.18
Icthyosis vulgaris	6	0.06
Xeroderma pigmentosus	2	0.02
Hansens	**52**	**0.55**

Table 2: The frequencies and rates of the diseases groups

Disease	Male(n)	%	Female(n)	%	Total(n)	%
Contact dermatitis	591	53.4	514	46.6	1105	11.7
Scabies	404	47.9	439	52.1	843	8.9
Dermatophytosis	361	42.9	480	57.1	841	8.9
Acne	195	46.4	225	53.6	420	4.4
Urticarial	220	38.9	345	61.1	565	6

Table 3: The distribution of the 5 most common diseases according to gender

DOI: 10.14260/jemds/2015/1433

Age Groups (Years):

Disease	0-9	10-19	20-29	30-39	40-49	50-59	60-69	>70	T
Contact dermatitis	157	163	177	127	176	95	139	71	1105
Scabies	175	227	197	60	88	49	40	7	843
Dermatophytosis	53	143	203	161	143	53	52	33	841
Acne	12	120	196	66	21	3	2	0	420
Urticaria	45	47	126	80	110	76	67	14	565

Table 4: Age distribution of most common skin diseases

Scabies was 2nd most common disease in our study. The low socioeconomic status of such patients, the scarcity of clean water may act as contributor factor in this regard. The lowest and highest rate of scabies which is increased by factors related to community life conditions and non-compliance with hygiene rules, were reported in Japan (0.15%)[15] and Mali (16.6%)[16] Dermatophytosis infection were the 3rd most common disease in our study. Tinea cruris is the most common among this group followed by tinea corporis. Tinea facei is rare among this group. The hot climate of the Kadapa may account for high incidence of fungal infection in the study group. Acne (4.4%), urticaria (6%), were relatively common both with female propendarence (53.6% & 61.1% respectively) in this study which is very close to turkey study.[14]

Skin and its appendages disorders constitute around 9%. Infection of skin and subcutaneous tissues like pyoderma, furuncle**,** cellulitis, and abscess constitute 8.1%. papulosquamous diseases encountered in this study (7.1%) while the most commonly encountered disease in this group was psoriasis (2.9%), followed by lichen planus (1.4%).

The incidence of Hansen's in this study is 0.55% which is less than 1% but very high compared to study in Imphal.[17] The incidence of melasma was 2.2% which was more in females and those who are exposing to sun frequently

CONCLUSION: Our study has clearly defined the different types of skin disease among the patients attended to the dermatology department of RIMS Kadapa. The study reveals that the people in this region are more prone to skin disease and the incidence of skin disease among females was more. The majority of the patients fall under the adult category. We found that allergic skin disease and skin infections were more common in this location.

The study represents a rough estimate of the incidence of skin disease in this location. It is clearly understood that the prevalence of skin diseases such as eczema and skin infections are more common in this region. This may be due to joint family, nature of occupation and living in unhygienic environments. Public awareness regarding personal hygiene and healthy living is necessary to reduce the burden of skin diseases and for improved quality of life in people especially in rural areas and developing nations.

ACKNOWLEDGEMENT: We are grateful to the Medical Superintendent, RIMS Hospital, Kadapa, for allowing us to use the hospital records.

REFERENCES:

1. Federman DG, Reid M, Feldman SR, Greenhoe J, Kirsner RS. The primary care provider and the care of skin disease: the patient's perspective. Arch Dermatol. 2001; 137: 25-29. PMID: 11176657.
2. Rook A. savin JA, Wilkinson DS. The prevalence, incidence and ecology of diseases of skin, In: Rook A. Wilkinson DS, Ebling FJ, Champion RH, Burton JL, editors, text book of dermatology. Oxford university press: Mumbai 1987. P. 39-53.
3. Chuang T-Y, Reisner G T. Dermatoepidemiology Part1 Epidemiologic methods. Int J Dermatol 1993; 32: 251-6.
4. An insight into the global burden of skin disease Loes M Hollestein and Tamar Nijsten Journal of Investigative Dermatology (2014) 134, 1499–1501.
5. Michael randall and Karen E Neil. Diseases management, A guide to clinical pharmacology pg-413.
6. Mehta TK. Pattern of skin diseases in India. Indian J Dermatol Venereol Leprol 1962; 28: 134-9.
7. Gangadharan C, Joseph A, Sarojini PA. Pattern of skin diseases in Kerala. Indian J Dermatol Venereol leprol 1976; 42: 49-5
8. Dayal SG, Gupta GP. A cross section of skin diseases in Bundelkhand region, UP. Indian J Dermatol Venereol Leprol 1977; 43: 258-61.
9. Jaiswal AK, Singh Gurmail. Pattern of skin diseases in Kashmir region of India. Indian J Dermatol Venereol Leprol 1999; 65: 258-60.
10. Nair S Pradeep, Nair TV. Gopala Krishnan. Pattern of dermatological diseases in Trivandrum. Indian J Dermatol Venereol Leprol 1999; 65: 261-3.
11. Kuruvilla M, Sridhar KS, Kumar P, Rao SG. Pattern of skin diseases in Bantwal Taluq, Dakshina Kannada. Indian J Dermatol Venereol Leprol 2000; 66: 247-8.
12. Johanson M-LT. Skin conditions and related need for medical care among persons 1-74 years, United States, 1971-74 Vital and Health Statistics: Series 11, No 212. 1978: 1-72.
13. Horn R. The pattern of skin disease in general practice. Dermatol Pract 1986; Dec: 14-19.
14. Prevalence of skin diseases in dermatology outpatient clinic in turkey Bilgili et al
15. 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. PMID: 21426384.
16. Mahe A, Cisse IAh, Faye O, N'Diaye HT, Niamba P. Skin diseases in Bamako (Mali). Int J Dermatol. 1998; 37: 673-676. PMID: 9762817.
17. Th. Bijayanti devi, G Zamzachin. Pattern of skin diseases in Imphal. Indian J Dermatol 2006: 51(2): 149-50.

DOI: 10.14260/jemds/2015/1433

ORIGINAL ARTICLE

AUTHORS:

1. N. L. Sirisha
2. M. Pavan Kumar
3. S. Sowjanya

PARTICULARS OF CONTRIBUTORS:

1. Assistant Professor, Department of DVL, RIMS, Kadapa, Andhra Pradesh.
2. Post Graduate, Department of DVL, RIMS, Kadapa, Andhra Pradesh.
3. Post Graduate, Department of DVL, RIMS, Kadapa, Andhra Pradesh.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. M. Pavan Kumar,
Post Graduate,
Department of Dermatology, Venereology, Leprology, RIMS, Kadapa, Andhra Pradesh.
E-mail: pavan.modepalli@gmail.com

FINANCIAL OR OTHER COMPETING INTERESTS: None

Date of Submission: 24/06/2015.
Date of Peer Review: 25/06/2015.
Date of Acceptance: 10/07/2015.
Date of Publishing: 14/07/2015.