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Epidemiological Pattern of Dermatoses among Adults Attending Dermatology Outpatient Department in a Tertiary Centre in Central Kerala

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Abstract
Dermatoses vary from country to country and region to region. There are very few studies on epidemiological pattern of dermatosis. The pattern of dermatoses serve as an index of community development and quality of health care provision .A hospital based descriptive observational study was conducted in a tertiary centre , which is a teaching institution in the public sector in central Kerala, among adults who attended the dermatology outpatient department for a period of six months. The participants in the study were given a validated semi structured interview schedule in which sociodemographic variables such as age, sex, religion, educational qualification marital status, socioeconomic status, occupation and diagnosis on dermatoses were captured .The data collected was then entered and analysed .Non-infectious dermatoses were more compared to infectious dermatoses. Among infectious dermatoses fungal infections were the commonest and among non-infectious dermatoses eczemas were the commonest .More than half of the patients belonged to the 18 to 36 category. Females outnumbered males in the total op attendees. More than ninety percent of study population were literate and majority were students and unemployed .Less than three fourths of the participants were married and two thirds were above the poverty line. Majority of them were Muslims and resided in villages .However educational status and occupation did not have a significant influence on the pattern of dermatoses. Early diagnosis and management can prevent the spread of infectious dermatoses thereby reduce the burden of dermatoses in the society
Keywords: *Epidemiology pattern, Dermatoses.*

Background

Dermatoses are common in developing countries which can vary from less severe superficial fungal infections to life threatening drug reactions such as Steven Johnson syndrome and Toxic Epidermal necrolysis. The pattern of dermatoses serves as an index of community development and quality of care provision

Introduction

Dermatoses are very much prevalent in developing countries[1]The prevalence of dermatoses in various studies varied from 6.16% to 51.9 % in various studies[2]. In Denmark, Egypt and Singapore, non-infectious dermatoses are common, but in UK, premalignant and malignant dermatoses are more common[4]. In India infectious

dermatosis are more common[4] .The pattern of dermatoses vary from country to country and from region to region, due to factors such as genetic, racial, regional, environmental, economic, socio cultural factors and level of literacy.[1,2]. Geographical factors like season and climate also contributes to the increased prevalence of certain type of skin dermatoses in a particular area. In developing countries low hygeine, poor access to water and overcrowding also play a role in case of certain diseases[3,4]. As dermatoses and their complications are a burden on the health system of a nation, epidemiological studies play a role[1,8]. Epidemiological studies play a role in determining disease pattern and for proper health care planning.[16,18] But conducting epidemiological study is not an easy task, so hospital based studies are being conducted for convenience[13].We do not have adequate data on incidence and prevalence of dermatological disorders in our country and we rely on the western data that is available.

During the last nine years no such epidemiological studies were conducted in Kerala .The present study was planned to get an insight into the various pattern of dermatoses in a tertiary care centre in Central Kerala and to study the relation between epidemiological factors and incidence of various dermatological disorders.

Aims of the Study

1. To study the epidemiological pattern of dermatoses among adults in the Dermatology outpatient department in a tertiary centre

Materials and Methods

A hospital based descriptive observational study conducted among all adults aged 18-60 years and speaking the regional language, who gave the informed written consent, attending the dermatology outpatient department in Government Medical College Ernakulam for a period of six months from February 2016 to July 2016 The participants in the study were given a validated semi structured interview schedule in which sociodemographic variables such as age, sex, religion, educational qualification ,marital status, socioeconomic status, occupation and diagnosis on dermatoses were captured .The data collected was then entered and analysed using SPSS version 21.Approval for the study was taken prior to data collection from Institutional Ethics Committee Government Medical College Ernakulam.

Results and Interpretation

Among the 4017 participants who were included in the study population the mean age was 36.10. Taking age category into consideration ,more than half (51.7%) of the participants belonged to the 18 to 36 years category and the rest (48.3%) to the 37 to 60 age category.

Table 1 Age category

Age group	Frequency	Percent	Valid Percent	Cumulative Percent
18-36	2077	51.7	51.7	51.7
36-60	1940	48.3	48.3	100.0
Total	4017	100.0	100.0	

In the study populationless than two thirds (63.6%) were females.

Table 2-Sex category

Sex	Frequency	Percent	Valid Percent	Cumulative Percent
Male	1463	36.4	36.4	36.4
Female	2554	63.6	63.6	100.0
Total	4017	100.0	100.0	

98.2% of the study population were literate with 23.5 % were graduates.

Table 3 Educational status

Educational status	Frequency	Percent	Valid Percent	Cumulative Percent
Illiterate	73	1.8	1.8	1.8
Literate	919	22.9	22.9	24.7
SSlC	994	24.7	24.7	49.4
plus2	687	17.1	17.1	66.5
Technical	217	5.4	5.4	71.9
Degree	946	23.5	23.5	95.5
Professional/PG	181	4.5	4.5	100.0
Total	4017	100.0	100.0	

Considering marital status, less than three fourths (72.7%) were married and the rest belonged to the unmarried (25.7%) separated (0.3%) and widowed (1.3%) category

Table 4-Marital status

Marital status	Frequency	Percent	Valid Percent	Cumulative Percent
Unmarried	1031	25.7	25.7	25.7
Married	2920	72.7	72.7	98.4
Separated/divorced	14	.3	.3	98.7
widow	52	1.3	1.3	100.0
Total	4017	100.0	100.0	

More than half of the participants were unemployed and students (52.5%).

Table 5 Occupational status

occupation	Frequency	Percent	Valid Percent	Cumulative Percent
government	281	7.0	7.0	7.0
private	818	20.4	20.4	27.4
business	108	2.7	2.7	30.0
fisherman	14	.3	.3	30.4
labourer	260	6.5	6.5	36.9
sales	48	1.2	1.2	38.1
driver	162	4.0	4.0	42.1
painting	37	.9	.9	43.0
mason	65	1.6	1.6	44.6
tailor	63	1.6	1.6	46.2
abroad	23	.6	.6	46.8
farmer	11	.3	.3	47.1
retired	17	.4	.4	47.5
unemployed	2110	52.5	52.5	100.0
Total	4017	100.0	100.0	

In the study population more than two third (67.4%) belonged to the 'above poverty line' category and the remaining (32.6%) to the ' below the poverty line'.

Table 6-socioeconomic status

socioeconomic status	Frequency	Percent	Valid Percent	Cumulative Percent
APL	2709	67.4	67.4	67.4
BPL	1308	32.6	32.6	100.0
Total	4017	100.0	100.0	

When religion was considered about less than half of the population were Muslims (43.1%)

Table 7 Religion

Religion	Frequency	Percent	Valid Percent	Cumulative Percent
Hindu	1595	39.7	39.7	39.7
Muslim	1733	43.1	43.1	82.8
Christian	688	17.1	17.1	100.0
others	1	.0	.0	100.0
Total	4017	100.0	100.0	

More than half (54.2%) of the participants resided in villages.

Table 8 Place of Residence

Residence	Frequency	Percent	Valid Percent	Cumulative Percent
city	281	7.0	7.0	7.0
town	1560	38.8	38.8	45.8
village	2176	54.2	54.2	100.0
Total	4017	100.0	100.0	

Among dermatoses, non Infectious dermatoses constituted about 65.1% and infectious dermatoses (34.9 %).Fungal infections (23.6%) constituted the majority in the infectious dermatoses category. Seasonal influence, environmental factors and misuse of topical steroids may be the reason for the higher percentage of fungal infections comparing previous studies[11]. Viral infections 3.4%, bacterial infections, (6%) parasitic infestations (1.5%) and protozoal infections (0.4%),Sexually transmitted infections 0.29%, Hansens disease (0.049%) respectively, STIs and Hansen's disease are less compared to previous studies which may be due to the proper implementation of National Health programmes. Among the non-infectious dermatoses eczemas 22.2% constituted the majority, vesiculobullous disorders 0.19%, Hair disorders 1.49%,mucosal disorders 0.22%, Drug reactions 0.72%, tumours 4.18%,miliaria 6.52%, lichen planus 0.9%autoimmune diseases like SLE 0.34%

Table .8 Dermatoses

Dermatoses	Frequency	Percent	Valid Percent	Cumulative Percent
Noninfectious	2614	65.1	65.1	65.1
Bacterial	243	6.0	6.0	71.1
Viral	136	3.4	3.4	74.5
Fungal	948	23.6	23.6	98.1
Parasitic	59	1.5	1.5	99.6
Protozoal	17	.4	.4	100.0
Total	4017	100.0	100.0	

Pie chart

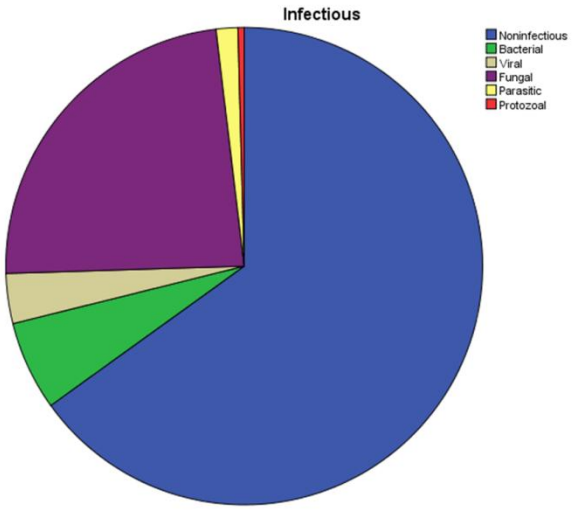

Table .9 Non-infectious

Noninfectious	Frequency	Percent
Psoriasis& disorders of keratinisation	90	2.2%
Hair	89	2.2%
Nail	5	.1%
Eczema	922	22.2%
Vesiculobullous	8	.2%
Autoimmune	38	2.77%
Congenital	9	.2%
Traumatic	3	.1%
Pruritus	177	4.4%
Mucosal disorders	9	0.22%
Miliaria	262	6.5%
tumours	168	4.18%
Lichen planus	39	0.9%
Drug reaction	29	0.72%
Hair disorders	60	1.49%

Discussion

When considering the disease pattern, 65.1% were non-infectious which is out of tune with the findings by researchers in southern India where infections were common. But studies in Guwahati and Uttarakhand showed a similar picture. In the non-infectious group, Eczemas constituted the majority (22.2%). In this study healthy age group of 18-60 was considered and more than 50% were of the younger age group[(18-36)]. This was at par with similar studies conducted in Telangana and Wardha[20] .The reason for this increase could be the social mobility of the younger population .In this study females were the majority which is similar to other studies[1,2,4,6]. The better socioeconomic positioning as evidenced by 67.4% could be the reason for the reduction in the infection load. Among the infective conditions, fungal infections accounted for 23.6%, which is the case in most studies in India, Bangladesh and a study from Pakistan, which could be due to the warm and humid climatic conditions. The religious practices and the traditional attire would be the reason contributing to the increased incidence of fungal infections in Muslims in this study.'

In this study, the patients attending the outpatient department were mostly literate, 24.7% with secondary education and 23.5%being degree holders. Increased literacy rate, leading to health consciousness and increased awareness may be the reason for the increased number of female patients (63.6%) compared to other studies were it was 50%[2,4,6,8,9]. 50% of the study population resided in villages and outpatient attendance is 16.33%, which is more ,when compared to studies conducted in Trivandrum in 1976 by Gangadharan C et al and in Thrissur, nine years back by Ashokan et al. This is also more when compared to 6.16% and 6.3% seen in studies conducted in Uttarakand and Gawahati respectively. The educational status and occupation did not have a significant effect on the pattern of dermatoses which is similar to other studies.[2] Unemployed category was found to be more than 50%.This could be because the students were not separately categorised in our study.[1]Early identification of dermatoses is important for treating patients and also to prevent the spread of infectious dermatoses.

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