

Profile of Skin Diseases – A Stratified Analysis

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Abstract

Introduction: The skin diseases are the most easily detectable diseases in a community. The profile of skin diseases vary with respect to non-modifiable factors such as age, gender, and genetics and modifiable factors such as geographical location, climate, and socioeconomic status.

Aim: This study aims to understand and analyze the profile of skin disease in patients, attending a tertiary care hospital in Central Kerala.

Materials and Methods: All regional language speaking adult patients of age category 18–36 and 37–60 attending the skin outpatient department of Government Medical College, Ernakulam, were interviewed and examined, the data collected were analyzed using SPSS version 21.

Results: Age is categorized into two groups 18–36 and 37–60. Both age groups were equally represented. Skin infections were more in the younger age group (36.8%). Females outnumbered males in the study. Fungal infections were more in females. About 72.7% were married. In all groups (married, unmarried, separated, and widow or widower), infections were more. Fungal infections were more in married group. About 67.4% of patients studied were above poverty line. Fungal and parasitic infections were more in patients of low socioeconomic status. Muslims constituted the majority in our study (43.1%).

Conclusion: Non-infectious diseases were more common in the older age group. Eczema was the most common. Among infections, fungal infection was the most common. The decrease in infections may be because of the fact that these are being treated by general practitioners. The increase in non-infectious cases can be taken as an increase in awareness among patients about the disease conditions and its treatment options and accessibility to health-care centers. However, as the burden of skin diseases at present is the same as in the previous studies, a little more planning may be needed to reduce the brunt, like training health-care providers and conducting awareness classes for the public.

Key words: Infectious, Non-infectious, Skin diseases

INTRODUCTION

Skin diseases are common and accounts for the fourth leading cause of non-fatal disease burden at the global level.^[1] Skin diseases carry significant morbidity leading to disfigurement, disability, or symptoms such as intractable itch, which can reduce the quality of life leading to isolation and economic burden.^[2] The prevalence of skin diseases in the general population varies from 6.3% to 11.2%. Skin diseases, which are commonly encountered in the

community, are an important disease group in health-care set-up. 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.^[3] The prevalence of skin disease differs between regions as a result of these factors. The recognition of the skin disease profile of a region is important in planning therapeutic and preventive health-care services.^[3] Such a study was conducted in Kerala 9 years back and the present study was also meant to compare it with the findings received then.^[4]

MATERIALS AND METHODS

An institutional observational study was conducted in the Skin Department of Government Medical College, Ernakulam, after getting the approval of the Institutional Ethics Committee. The study participants were, all regional

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language speaking and new patients of the age group (18–60 years) attending the skin outpatient department for a period of 6 months from February 2016 to July 2016. Those who consented for the study were given a questionnaire which included the personal, occupational, and sociodemographic variables such as age, sex, marital status, educational status, and geographic location. The data were collected and analyzed using SPSS version 21.

RESULTS

Of all the total new patients attending the hospital, 10% attended skin outpatient department. There were 4017 participants in this study group of the age 18–60 years. Taking the age 36.10 as mean age, it was found that both categories 18–36 and 37–60 were almost equally represented [Table 1].

The skin diseases were classified as non-infectious and infectious. Bacterial, viral, fungal, parasitic, and protozoal diseases were considered under infectious category. Under the non-infectious group comes psoriasis, eczema, hair and nail disorders, pruritus, autoimmune conditions, and miscellaneous. Non-infectious diseases were marginally more in the 37–60 age group (33.3%) and infections in the 18–36 age group (36.8%). Viral and parasitic infections were more among the 18–36 age group about 5% and 2% when compared to 1.7% and 0.9% in the other group [Table 2].

There were about 63% of females in the study group. Both males and females showed a higher incidence of

non-infectious disease around 60%, but infections seemed to be more by 1.1% in the males. Except for the fungal infection, the rest of the infections were more in male gender [Table 3].

When considering the marital status, 72.7% were married and almost quarter were unmarried. Non-infectious diseases were the common skin disease in all the categories. Bacterial and viral infections were more in the separated category. Fungal infections were the common skin infection affecting the married and parasitic infection in the unmarried groups [Table 4].

More than half (67.4%) of the participants belonged to the upper socioeconomic status. Irrespective of their socioeconomic status all patients suffered from non-infectious diseases. Fungal and parasitic infections were more in the BPL (below poverty line) category, but viral infections more in the APL (above poverty line) group. Bacterial infections were almost the same in both the groups [Table 5].

Religion-wise Muslims were about 43.1%, Hindus, 39.7%, and Christians smaller in number about 17.1%. All the infections except viral infections were more in Muslims.

DISCUSSION

The multitude of skin problem as represented by 10% of the outpatient attendance in our study which was similar to that in studies conducted in Nepal in 2014^[5] and in Trichur in 2009.^[4] This shows that the burden of skin diseases has remained the same in spite of advances made in the field. It is important to study the burden of skin disease in low resource setting which help in delivering high quality care in improving the prevalence of skin disease.^[6] A study in Kolkata showed a slightly less percentage 4.16% only.^[2] Non-infectious diseases (65.4%) were found to be more than infectious. Of this, eczema is the most common. This is in par with studies conducted in Kumaon region, Northwest India, Kolkata, Central Iran, and Faridpur^[2,7,5,8] but against that found in Trichur, Chennai, and hilly areas of Uttarakhand.^[9,4,10] The increase in eczema may be because the infectious diseases may be treated by the general practitioners due to the ease in the diagnosis. Nowadays, because of the various awareness programs going on, the knowledge about skin diseases, especially non-infective diseases, encourages the patients to self-report. Studies conducted in Indore and Maharashtra^[11] showed that patients in younger age group came forward to seek medical help compared to older age group. However, in this study, the representation of both groups was almost the same. Jayanthi and Anandan^[10] also found that patients of the age category 20–50 years attended the outpatient department

Table 1: Age correlation

Age	Age category				Total
	Non-infectious	Infectious	Both	Miscellaneous	
18–36	569	764	39	705	2077
	27.4%	36.8%	1.9%	33.9%	100.0%
37–60	646	661	28	605	1940
	33.3%	34.1%	1.4%	31.2%	100.0%
Total	1215	1425	67	1310	4017
	30.2%	35.5%	1.7%	32.6%	100.0%

Table 2: Sex correlation

Sex	Sex				Total
	Non-infectious	Infectious	Both	Miscellaneous	
Male	458	554	25	426	1463
	31.3%	37.9%	1.7%	29.1%	100.0%
Female	757	871	42	884	2554
	29.6%	34.1%	1.6%	34.6%	100.0%
Total	1215	1425	67	1310	4017
	30.2%	35.5%	1.7%	32.6%	100.0%

Table 3: Skin disease and marital status

Marital status	Marital status				Total
	Non-infectious	Infectious	Both	Miscellaneous	
Unmarried	265 25.7%	380 36.9%	15 1.5%	371 36.0%	1031 100.0%
Married	926 31.7%	1026 35.1%	51 1.7%	917 31.4%	2920 100.0%
Separated/divorced	5 35.7%	6 42.9%	0 .0%	3 21.4%	14 100.0%
Widow	19 36.5%	13 25.0%	1 1.9%	19 36.5%	52 100.0%
Total	1215 30.2%	1425 35.5%	67 1.7%	1310 32.6%	4017 100.0%

Table 4: Skin disease and socioeconomic status

Socioeconomic status	Non-infectious	Infectious					Total
		Bacterial	Viral	Fungal	Parasitic	Protozoal	
APL (above poverty line)	1786 65.9%	165 6.1%	99 3.7%	616 22.7%	32 1.2%	11 .4%	2709 100.0%
BPL (below poverty line)	828 63.3%	78 6.0%	37 2.8%	332 25.4%	27 2.1%	6 0.5%	1308 100.0%
Total	2614 65.1%	243 6.0%	136 3.4%	948 23.6%	59 1.5%	17 0.4%	4017 100.0%

Table 5: Skin disease and religion

Religion	Non-infectious	Infectious					Total
		Bacterial	Viral	Fungal	Parasitic	Protozoal	
Hindu	1092 68.5%	94 5.9%	51 3.2%	334 20.9%	15 0.9%	9 0.6%	1595 100.0%
Muslim	1079 62.3%	111 6.4%	52 3.0%	451 26.0%	34 2.0%	6 0.3%	1733 100.0%
Christian	443 64.4%	37 5.4%	33 4.8%	163 23.7%	10 1.5%	2 0.3%	688 100.0%
Others	0 0.0%	1 100.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%
Total	2614 65.1%	243 6.0%	136 3.4%	948 23.6%	59 1.5%	17 0.4%	4017 100.0%

the most. A probable reason could be because of inability to come due to age restraints in elderly and to avoid loss of attendance at school in the younger ones. Viral and parasitic infections were more in the 18–36 category, because they are the floating population and have to stay away from home for pursuing studies and seeking jobs. In two studies conducted in North India, Uttarakhand,^[7] and in Maharashtra,^[11] males outnumbered females. However, studies in Central Iran, Nepal, Kolkata, and Chennai^[12,13,5,10] were at par with our finding of more females than males. This could be because of the awareness among females and accessibility of medical services. We found that infections were more in males, when compared to females, but fungal infections were more in females which is not the case in Uttarakhand,^[7] where males outnumbered females. However, a study in Turkey^[3] showed a female preponderance in case of fungal infections. Increase

trend in fungal infections in females can be attributed to their attire and their involvement in household chores. More bacterial, viral, and parasitic infections in males could be due to their outdoor activities. When it comes to the marital status, fungal infections were more in the married. The interactions with the family members and if employed, balancing between workplace and home and lack of time for personal needs and self-care may be cited as the reasons. An increase in fungal and parasitic infections in the patients belonging to the low socioeconomic status was noted in our study. This was not the finding in a study in Kolkata^[2] where both infectious and non-infectious cases were the same in lower class and upper class showed more of infections. The reason for increase of infection in the lower strata could be due to overcrowding, lack of facilities for basic amenities, and lack of awareness. Muslims formed the majority of the patients enrolled in

the study. The occurrence of fungal, bacterial, and parasitic infections was more in this category. The reason could be the religious practices which need frequent washing, close interactions between people of same community at different meeting places at different times of the day.

CONCLUSION

The profile of skin disease in a region gives an insight into the distribution and magnitude of skin problems in that area. This knowledge is an index to health-care facilities available. Hence, to reduce the disease burden, in addition to proper recognition and treatment of various skin disorders, educating the patients about the disease condition, the need to comply, proper follow-up, and against misuse of medications should be carried out promptly. This study did not include all the patients attending the skin outpatient clinic so maybe lacking the true depth of the situation. The study period was only 6 months which covered only summer and monsoon. Hence, an overview of the proper situation could not be obtained.

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