ORIGINAL ARTICLE

PATTERN OF SKIN DISEASES IN PATIENTS VISITING A TERTIARY CARE HEALTH FACILITY AT HYDERABAD, PAKISTAN

Khalida Naz Memon, Rafique Ahmed Soomro*, Mohammad Shahid Ansari**

Faculty of Community Medicine and Public Health Sciences, Liaquat University of Medical and Health Sciences, Jamshoro, *Department of Community Medicine, Liaquat National Medical College, Karachi, **PHDC, Jamshoro, Pakistan

Background: The morbidity associated with skin diseases makes them an important public health problem. Very scanty literature is found on the problem which is either disease-based, community based or a specified population group-based. Objective of this study was to assess the pattern of skin diseases in patients and to determine their relation with demographic characteristics. **Methods:** This descriptive study was conducted at Dermatology Out-patient Department of Liaquat University Hospital, Jamshoro, Pakistan for the period from 10th January to 10th February 2008. Four hundred and eleven patients were enrolled during the study period. The study population comprised of newly diagnosed cases as well as relapsing cases presenting at the facility. The criterion for registering the patients was clinical diagnosis although few cases were supported by investigations, too. The data was collected through a pre-designed questionnaire and analysed through SPSS-12. **Result:** Skin problems are fairly common among children and women. In children of less than 10 years age, 82.5% visiting the facility suffer from infectious skin diseases. Among the infectious diseases, scabies is highly prevalent disease (45.5%). The majority of the patients belong to rural or slum areas (77.2%), low socio-economic strata (68.9%), and living in overcrowded families (82%). A strong association between skin infections and water inadequacy (p=0.016) was found, and scabies shows a strong statistical association with overcrowding (p=0.025). **Conclusion:** The skin diseases involve every age strata of our population but it is fairly common in younger age group, women, and people who do not practice hygiene. Out-reach services for the rural and slum communities and health education will give good results on prevention of skin diseases.

Keywords: Skin diseases, demographic characteristics, environmental factors.

INTRODUCTION

Dermatology is one of the many specialties evolving from the internal medicine. Till 19th century, physicians were little concerned with the skin diseases apart from the exanthematic eruptions of acute fevers.[1] The first epidemiological discovery in dermatology is traced back to year 1746 AD when James Lind discovered that scurvy in sailors was related to dietary factors.[2] The skin disease pattern in a population is generally determined by different ecological factors like environment, economy, literacy, and social customs.[3] Besides this, the overcrowding and poor standards of hygiene are important factors determining the distribution of skin diseases in developing countries.[4] The pattern of skin diseases also varies from country to country and in various regions within the same country. It is observed that dermatological problems constitute at least 30% of all outpatient visits to the paediatricians, and 30% of all visits to a dermatologist involve children.[5]

The objective of this study was to assess the pattern of skin diseases in patients visiting the dermatology Out-patient Department of LUMHS Hospital in relation to basic demographic characteristics and environmental conditions.

SUBJECTS AND METHODS

It was a descriptive cross-sectional study of one months duration conducted at Dermatology Out-patient Department, Liaquat University of Medical and Health Sciences Hospital. After taking informed consent of the patients, the data was collected on a pre-formed and pre-tested questionnaire. We registered 411 new and recurrent cases visiting the facility. The variables recorded included age, gender, residence, and employment, educational and socio-economic status of the patients. The environmental factors taken into account were overcrowding, hygiene and good availability of water.

All new/recurrent cases including referred cases from general practitioners as well as referred from different wards of the hospital were included. The new case was defined as a patient who reported for the first time with clinically apparent dermatological problem and had not yet started the treatment. The recurrent case was the patient who was suffering from clinically apparent skin disease, had received treatment and was cured, but again developed same problem after a period of one month.

Burns, congenital/traumatic dermatological problem, acute febrile exanthematic rashes and patients visiting the facility as follow-up for the same skin

problem were excluded. Data were collected on special proforma and analysed using SPSS-12.

RESULTS

Overall, majority of the patients were aged 0–20 years 259 (63%), females 240 (58.4%), belonged to rural/slum areas 317 (77.2%), uneducated 139 (56.9%). Among the educated patients, 39% were only primarily educated and 40.92% were matriculates. Out of total four hundred and eleven patients, 283 (68.9%) belonged to poor socio-economic class and 337 (82%) were those who were residing in overcrowded homes. Housewives were (29.2%), children/students (50.1%), unemployed 4.9%, and 12.45% were labourers. Two hundred and sixteen patients (52.6%) complained of inadequacy of water and in 218 (53%) patients, hygiene was not maintained (Table-1).

Table-1: Demographic characteristics of study population (n=411)

Characteristic	Number (%)
Age (Years)	
0–10	172 (41.8)
11–20	87 (21.2)
>20	152 (36.9)
Gender	
Males	171 (41.6)
Females	240 (58.4)
Residence	
Rural/Slum	317 (77.1)
Urban	94 (22.9)
Educational Status	
Children below school age	167 (40.6)
Illiterate	139 (56.9)
Literate	105 (43.1)
Socio-economic status	
Poor	238 (68.9)
Fair	114 (27.7)
Good	14 (3.4)
Over-crowding Households	
Yes	337 (82)
No	74 (18)
Water Adequacy	
Yes	195 (47.4)
No	216 (52.6)
Personal Hygiene	
Maintained	193 (47)
Not maintained	218 (53)

The infectious skin diseases were more commonly seen (73.7%) compared to non-infectious diseases (26.3%). Scabies was on the top (45.5%) followed by eczema and dermatitis (18%) (Table-2).

Table-2: Pattern of skin diseases (n=411)

Type of disease	Number (%)
Infectious Skin diseases	303 (73.7)
Non-infectious skin diseases	108 (26.3)
Type of disease	
Scabies	187 (45.5)
Eczemas dermatitis, urticaria	74 (18.0)
Fungal infectious	54 (13.1)
Folliculitis	18 (4.4)
Acne	16 (3.9)
Impetigo	14 (3.4)
Herpes Zoster	13 (3.2)
Other skin diseases	35 (8.5)

Water inadequacy was seen to be strongly related to infectious skin diseases (p=0.016) (Table-3). This relationship was even more strongly seen in scabies (p=0.001). Bad hygiene was seen to be related more with infectious skin diseases especially with scabies (p=0.00) (Table-4). The infectious skin diseases were more frequently seen in members of the same families (p=0.025) (Table-5).

The gender-wise distribution of scabies was males 81 (43.3%), and females 106 (56.7%) out of total 187 patients of scabies. Although more females than males pay visits for scabies but there is no significant association between gender and occurrence of scabies (p=0.521) (Table-6).

Table-3: Water inadequacy and its relation with infectious skin diseases (n=411)

	Inadequacy of water (%)	
Type of skin disease	Yes	No
Infectious diseases	170	133
Non-infectious diseases	46	62

p=0.016

Table – 4: Association of infectious skin diseases and maintenance of hygiene (n=411)

	Maintenance of hygiene (%)	
Type of skin disease	Yes	No
Infectious diseases	128	175
Non-infectious diseases	65	43

p=0.001

Table -5: Association of infectious skin diseases and the family history (n=411)

	Family History (%)	
Type of skin disease	Yes	**No**
Infectious diseases	197	106
Non-infectious diseases	57	51

p=0.025

Table-6: Gender distributions of scabies (n=411)

	Gender		
Scabies	**Male**	**Female**	**Total**
Yes	81	106	187
No	90	134	224
Total	**171**	**240**	**411**

p=0.521

Although majority of our patients belong to rural or slum areas, the study does not show significant correlation between type of skin disease and area of residence (p=0.54).

DISCUSSION

The study of disease pattern in an out-patient setting provides an opportunity to assess the health status of the population catered by the respective health facility. Although the age of the patients enrolled in our study varied from six months to eighty years, 41.85% of the registered patients were below 10 years. The age related finding is also endorsed by a study in South India showing the prevalence of skin diseases ranging from 8.7%–35%.[5] Children are more vulnerable to develop skin infections as they are more exposed to unhygienic conditions in addition to some other predisposing factors like less developed

immune system, family history, traditional taboos, poor nutritional status, over-crowding and self medications given by the care-givers. At present, there is no well-established concept of paediatric dermatologists, and majority of children affected by dermatological problems are referred to secondary or tertiary care facility seeking experts' opinion. The infectious skin diseases and dermal parasitosis are commonly seen in less privileged countries like ours as revealed by our study too. A similar study conducted in India found infectious skin diseases to be 42.68% of the total skin diseases.[6] The reason of this difference can be that our study covers all strata of the population and the former study covers only the age group 10–29 years. Our study is only relying on clinical diagnosis. This could have incorporated more cases of infections in our data. The less privileged people are poor in hygiene, less aware about preventive methods against infections and also poor in health seeking behaviour. This is also endorsed by World Bank report 2002 that in less developed countries, the estimated skin disease cases are more than 600 million.[7] Regarding gender wise distribution of the skin diseases, there is a slight female preponderance. This is quite comparable with another study conducted in Basra, Iraq.[2] This can be due to more awareness of females about skin problems due to their cosmetic appearance. On the contrary, males overlook many of such problems thinking that they do not justify the medical attention.

Among infections, scabies was on the top (45.5%) followed by fungal infections (13.1%). A recent survey by International Foundation of Dermatology in 9 countries around the world also reveals scabies as the most common infectious skin disease.[7] Some other studies show fungal infestations to be on the top of skin infections[5] the difference can be due to difference in the climate. The females' preponderance of scabies, can be due to their close contact with children and pet animals, less maintenance of hygiene and shared sleeping areas. Scabies also shows strong association with history in other family members. This throws light on need of community-wide attention, in contrast to personalised treatment, to get control over this problem. Besides this, water inadequacy is strongly associated with skin infections as well as with scabies. The frequency of dermatitis, eczema and allied allergic skin manifestations form 18% of the cases which is quite comparable to another study revealing this figure as 21% of the total cases.[8] A similar study carried out in Iran shows frequency of these diseases as 37.8%.[9] The variation in occurrence of dermatitis may be due to difference of condition, genetic factors, occupational exposures and chance of contact with different physical and chemical agents.

CONCLUSION

Skin diseases specially the skin infections like scabies are commonly seen in younger age group; the age bears an indirect relationship with occurrence of this problem. Among the non-infectious skin involvement, the allergic diseases are very commonly seen in all strata of the population. Bad hygiene practice and inadequacy of water are strongly associated with infectious skin diseases.

REFERENCES

1. Thappa DM. History of dermatology, venereology and leprology in India. J Postgrad Med 2002;48(2):160–5.
2. Kathem K, Rubiay A. Dermato-epidemiology: A Household survey among two urban areas in Basrah City, Iraq. Int J Dermatol 2005;44:641–5.
3. Rao GS, Kumar SS, Sandhya. Pattern of skin diseases in an Indian village. Indian J Med Sci 2003;57(3):108–10.
4. Dogra S, Kumar B. Epidemiology of Skin Diseases in School Children: A Study from Northern India. Pediatr Dermatol 2003;20(6):470–3.
5. Karthikeyan K, Thappa DM, Jeevankumar B. Pattern of Pediatric Dermatoses in a Referral Center in South India. Indian Pediatr 2004;41:373–7.
6. Maria K, Sridhar KS, Pramond K, Rao G. Pattern of skin diseases in Bantwal Taluq, Dakshina Kannada. Indian J Dermatol Venereol Leprol 2000;66(5):247–8.
7. Hay R, Bendeck SE, Chen S. Skin Diseases. In: Jamison DT, Breman JG, Measham AR, editors. Disease Control Priorities in Developing Countries. 2nd edition. Washington (DC): World Bank; 2006. Chapter 37. Available from: http://www.ncbi.nlm.nih.gov/books/NBK11733/
8. Nuzhat Y, Khan MR. Spectrum of common childhood skin diseases: A single centre experience. J Pak Med Assoc 2005;55(2):60–3.
9. Abbas Z, Hosein M. Prevalence of skin diseases in Hamedan, Iran in 2002. Indian J Dermatol 2005;50(4):208–11.

Address for Correspondence:

Dr. Khalida Naz Memon, House No. 11-A, Muhammadi Town, Wadhoo Wah Road, Hyderabad, Pakistan. **Cell:** +92-306-3572147

Email: meonk63@yahoo.com