

“Pattern and Prevalence of Skin Diseases in OPD: A study in Pabna Medical College Hospital, Pabna, Bangladesh”

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Abstract: This was a cross-sectional study and was conducted in the outpatient department of Pabna Medical College Hospital, Pabna, Bangladesh during the period from January 2018 to December 2018. In our study period, total 2, 277, 27 patients visited OPD. Among them 25,455 patients visited OPD for skin disorder/diseases. All the patients at any age and sex who were attended in the OPD of Skin & Venereal Diseases of the hospital were selected as study population. In this study, we found among 26,980 participants, 52% was suffering from infectious and 48% from non-infectious skin diseases. Among the patients with infectious skin diseases it was found parasitic, fungal and bacterial infection were about 35.56%, 27.44% and 18.56% respectively. On the other hand, in noninfectious group about 25% patients suffer from scabies, 20% patients suffer from eczema or dermatitis, and 10 to 15% suffer from acne only. So, betterment for the patients with skin diseases, we should pay more attention to those four (4) skin diseases and disorders at first. Diagnosis was made on clinical basis by expert dermatologist. Lab investigations were restricted to the cases where it carried diagnostic importance. In this study we found 52% patients of our study were suffering from infectious diseases. Among that 35.56% had parasitic infection which was the highest ratio. Besides this 27.44% had fungal, 18.56% had bacterial, 9.56% had viral, 4.72% had STI, and (4.16%) had other infections. On the other hand, we found 48% patients had several types of non-infectious diseases and disorders. The highest number of patients with non-infectious diseases was suffering from scabies. This number was 1681 (37.79%). In rest of the patients 795 (17.97%) had Eczema & Dermatitis 634 (14.25%) had acne, 623 (14.01%) had urticaria, 3.15% had drug reaction, 8.70% had vitiligo and rest 4.22% patients had some other noninfectious skin diseases. We identify that a massive problem of skin diseases is present in the OPD. Infectious skin diseases in most cases bacterial and parasitic still predominant in Bangladesh however it is fewer frequent in developed countries.

Keywords: Pattern, Prevalence, Infectious, Non-infectious, Skin Disease, Out Patient Department (OPD).

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I. Introduction

Morbidity of skin diseases is significant through disfigurement, disability or symptoms such as intractable itch impairs quality of life, even social isolation and economic burden. Death, though rare but still seen from metastatic skin cancer. Many times, some dermatological manifestations may give some clue to the presence of benign or malignant systemic diseases in individual. Despite the high frequency of certain skin diseases in developing countries, they have so far not been regarded as a significant health problem in the development of public health strategy. Pattern of skin diseases vary from country to country. Even in the same country it differs from region to region. Types of skin diseases are influenced by various factors like genetic, race, religion, occupation, nutrition and habits. Geographical factors such as season and climate also contribute to the increased prevalence of certain type of skin disorder in a particular area. Bangladesh is such a country where wide variation in climate, socio-economic status, religion, and customs is quite prevalent in different parts of the country. In developing countries, other than hot and humid climatic condition, low hygiene, poor access to water, overcrowding, high interpersonal contact also plays significant etiologic role for certain skin diseases like pyoderma, scabies, fungal infection. In developing countries 70% of the people suffer from skin diseases in some part of their life. Many do not have access to basic skin services and even in developed countries 15% of the patients apply home remedies before proper medical

services⁷. Many of the skin infections are endemic in developing countries. However, the epidemiology of these diseases is inadequately understood in many areas, particularly in Bangladesh⁸. Different studies have shown different results. However, most of the result from the Indian subcontinent shows similar to the present study result. In developed countries like U.K., Denmark, Egypt, Singapore shows different results. In Indian subcontinent infectious skin diseases are more common than non-infectious diseases even in Ghana^{9,10,11}. Whereas in Denmark, Egypt and in Singapore dermatoses are more common and in U.K. pre-malignant and malignant skin diseases are more common^{12,13}. Moreover, there is scarcity of knowledge about common skin diseases which can be very easily treated by general practitioners reducing the burden on specialized centers for management of more complicated skin diseases. In addition, there is a need to create awareness among public and primary healthcare providers to educate people about preventive aspects related to skin diseases so that the burden of disease can be minimized¹⁴. Therefore, this present study was undertaken to evaluate the pattern of skin diseases among the patients attending the OPD of a tertiary care hospital at Pabna in Bangladesh.

II. Objectives

General objective:

- To evaluate the pattern of skin diseases attending OPD in a tertiary hospital in Bangladesh.

Specific objective:

- To assess the socio-economic and demographic status of the patients with skin diseases.
- To compare the pattern of skin diseases attending OPD in a tertiary hospital in Bangladesh.

III. Materials & Methods

It was a cross-sectional study conducted in the outpatient department of Skin & Venereal Diseases in Pabna Medical College Hospital, Pabna, Bangladesh during the period from June 2018 to May 2019. All age groups and both sex who were attended in the OPD of Skin & Venereal Diseases of the hospital were considered as study participants. For the study, newly diagnosed cases were included. Twenty-five thousand, four hundred, fifty-five (25,455) patients were recruited according to study population. There was a pre designed questionnaire for data collection from the respondents. In this study, the socio-demographic profiles and diseases pattern were recorded on the data sheet by some trained staffs. Diagnosis was made on clinical basis by expert dermatologist. Lab investigations were restricted to the cases where it carried diagnostic importance. Data were collected through direct interview of the patients at the respective departments by the researcher and competent colleagues. Collected data was checked and edited first. Then they were processed with the help of software SPSS (Statistical Package for Social Sciences) version 16 and analyzed.

IV. Result

In total 25,455 patients were recruited for this study who were represented with skin diseases in the OPD of that tertiary care hospital. In our study, 13,236.6 (52%) was male and 12,218.4 (48%) were female. The highest ratio of patients was from 0 to 12 years' age group and the number was 6,872.85 (27%). Then it followed 4,836.45 (19%), 6,676.85 (26.23%), 3,441.52 (13.52. %) and 3,627.34 (14.25%) for 13-18, 19-40, 41-60, 60+ age groups respectively. To make clearer we also showed the graphical presentation of several sufferer age group patients in Figure I. according to yearly family income status in our study out of 10,000 respondent we found, 12,727.5 (50%), 8,400.15 (33%) and 4,327.35 (17%) were from financially poor, mid labeled and sound family respectively. This may be an indication of more abilities of financially sound families to prevent several skin diseases. We found infectious and non-infectious, both type of diseases in our study. In Table II we showed that 5,552 patients of our study were suffering from infectious diseases. Among these 5,552 patients 1,844 (33.21%) had parasitic infection which was the highest ratio of infectious diseases. Besides this 1,570 (28.28%) had fungal, 1,114 (20.06%) had bacterial, 513 (9.23%) had viral, 262 (4.72%) had STI, and 231 (4.16%) had other infections. On the other hand, we found 4,448 patients had several types of non-infectious diseases and disorders. In Table III we showed that, the highest number of patients with non-infectious diseases was suffering from scabies. This number was 1,681 (37.79%). In rest of the patients 795 (17.97%) had Eczema & Dermatitis 634 (14.25%) had acne, 623 (14.01%) had urticaria, 3.15% had drug reaction, 8.70% had vitiligo and rest 4.22% patients had some other noninfectious skin diseases. In figure we showed that, among 10,000 selected respondents, 55.52% (5,552) were suffering from some infectious and 44.48% (4,448) from some non-infectious skin diseases. In our study we found maximum patients from 0 to 12 years' age group.

Figure I: Prevalence of skin diseases according to age. (n=25,455)

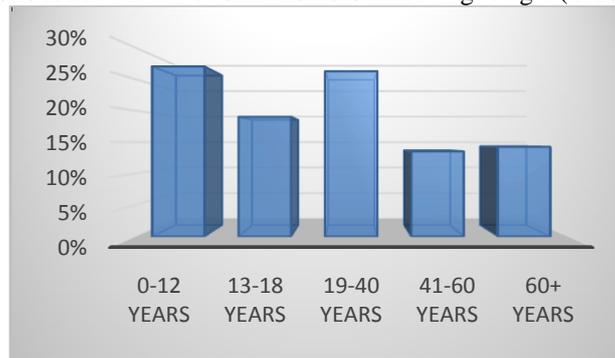


Figure II: Distribution of family income label of respondents. (n=25,455)

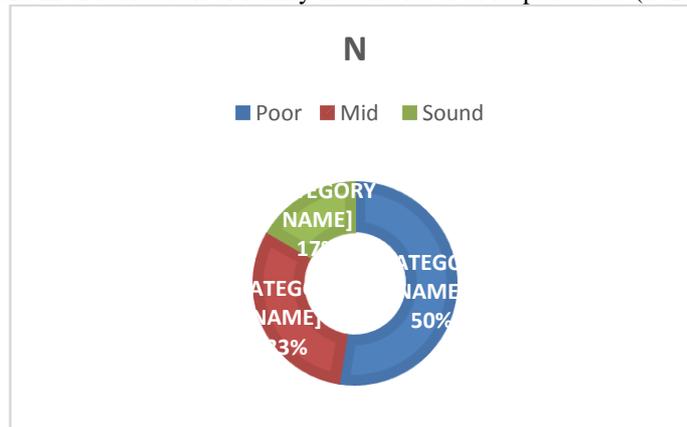


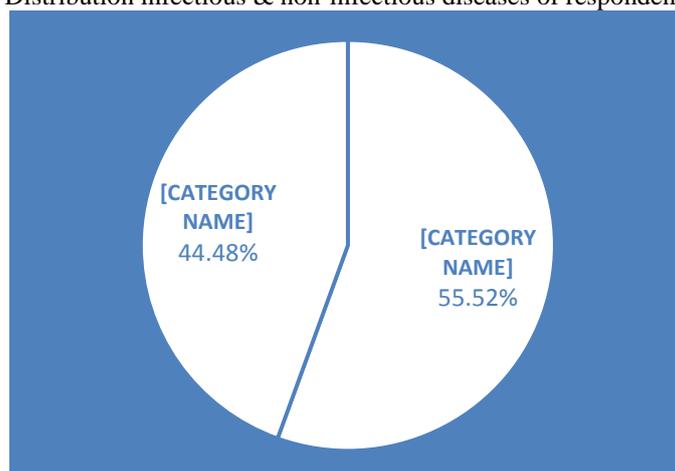
Table II: Distribution of infectious diseases of respondents (n=5552)

| Infectious Diseases | n | % |
|---------------------------|------|--------|
| Parasitic | 1844 | 33.21 |
| Fungal | 1570 | 28.28 |
| Bacterial | 1114 | 20.06 |
| Viral | 513 | 9.23 |
| STI | 262 | 4.72 |
| Other infectious diseases | 231 | 4.16 |
| Total | 5552 | 100.00 |

Table III: Distribution of non-infectious diseases of respondents (n=4448)

| Non Infectious Diseases | n | % |
|-------------------------------|------|--------|
| Scabies | 1681 | 37.79 |
| Eczema/Dermatitis | 795 | 17.87 |
| Acne | 634 | 14.25 |
| Urticaria | 623 | 14.01 |
| Drug reaction | 387 | 3.15 |
| Vitiligo | 977 | 8.70 |
| Other non-infectious diseases | 188 | 4.22 |
| Total | 4448 | 100.00 |

Figure III: Distribution infectious & non-infectious diseases of respondents (n=25,455)



V. Discussion

In total 10,000 patients were recruited for this study who were represented with skin diseases in the OPD of that tertiary care hospital. In our study out of 10,000 patients 5,098 (50.98%) was male and 4,902 (49.02%) were female. We found financially sound family respondents are very low in number. The majority of the patients were from poor socio-economic condition which was 50.0% cases followed by mid labeled and sound. This is similar to in a study by Kar et al⁹ though in that study most of the patients were under v class (22.35%). But in maximum study they recorded the data regarding living atmosphere which may help to find more specific information. In some study^{15,16} they mentioned about social score of respondents which may also specific. In infectious skin diseases group we found about one third (33.21%) patients were with parasitic infection. But there had not been conducted enough studies regarding parasitic infections. Similar information we found from some of the study^{17,18} which was very disappointing. A study in Dermatology O.P.D of Gauhati Medical college in India done by Das KK, 2003 found Eczema (23.1%), Pyoderma (14.29%), Fungal infections (14.24%) and Psoriasis (7.7%) were the major skin diseases in that part of the country²⁰. In Table II we showed that 5552 patients of our study were suffering from infectious skin diseases and among them 1844 (33.21%) had parasitic infection which was the highest ratio of infectious diseases. Besides this 1570 (28.28%) had fungal, 1114 (20.06) had bacterial, 513 (9.23%) had viral, 262 (4.72%) had STI (Sexual transmitted infection), and 231 (4.16%) had other infections. On the other hand, we found 4442 patients had several types of non-infectious diseases and disorders. In Table III we showed that, the highest number of patients with non-infectious diseases was suffering from scabies. This number was 1681 (37.79%). In rest of the patients 795 (17.97%) had Eczema & Dermatitis 634 (14.25%) had acne, 623 (14.01%) had urticaria, 3.15% had drug reaction, 8.70% had vitiligo and rest 4.22% patients had some other noninfectious skin diseases. Sharma et al. have shown that the incidence of drug reaction necessitating hospital admission ranges from 3-8%¹⁹. Meanwhile, in this study, we found incidence of drug reaction 3.15%. Maximum patients we found in our study from 0 to 12 years' age group which relates to the study conducted by Fawzia Farag Mostafa et al.²¹ where they showed that bacterial infection was major problem among the school going children. So, age may be a vital factor in the treatment in several infectious as well as non-infectious skin diseases in this region.

Limitations of the study

This was a single center study. So, the results may not reflect the scenarios of the whole country.

VI. Conclusion and Recommendations

We can conclude that young age group is the most vulnerable group for skin related diseases in Bangladesh. Government and policy maker should give more attention to this group for being a healthy society with free of skin treatments.

References

- [1]. Hay R, Sandra E, Chen BS. Skin diseases in disease control priorities in developing countries. [accessed online www.ncbi.nlm.nih.gov/books/NBK11733; 24th.November 2011]. p.708
- [2]. Schofield O.M.V, Hunter J.A.A. Diseases of the skin in Davidson's Principles & Practice of Medicine, 21st. Edition, Edinburg, UK Publisher Elsevier. 2011:1376
- [3]. Zamanian A, Mahjub H. Prevalence of skin diseases in Hamedan, Iran in 2002. Indian Journal of Dermatology 2005;50(4):208-11
- [4]. Atraide DD, Akpa MR, George IO. The pattern of skin disorders in a Nigerian tertiary hospital. Journal of Public health and epidemiology. 2011;3(4):177-81

- [5]. Devi TB, Zamzachin G. Pattern of skin diseases in Imphal. Indian journal of Dermatology. 2006;51(2):149-50
- [6]. Symvoulakis EK, Krasagakis K, Komninos ID, Kastrinakis I, Lyronis I, Philalithis A, et al. Primary care and pattern of skin diseases in a Mediterranean island. BMC Family Practice. 2006;7(1): 6:201-10
- [7]. Grover S, Ranyal RK, Bedi MK. A cross section of skin diseases in rural Allahabad. Indian J Dermatol 2008; 53:179-81
- [8]. Jain S, Barambhe MS, Jain J, Jajoo UN, Pandey N. Prevalence of skin diseases in rural Central India: A community-based, cross-sectional, observational study. Journal of Mahatma Gandhi Institute of Medical Sciences 2016;21(2):111-15
- [9]. Kar C, Das S, Roy AK. Pattern of skin diseases in a tertiary institution in Kolkata. Indian Journal of Dermatology. 2014;59(2):209
- [10]. Das S, Chatterjee T. Pattern of skin diseases in a peripheral hospital's skin OPD: A study of 2550 patients. Indian J Dermatol 2007; 52:93-5
- [11]. Doe PT, Asiedu A, Acheampong JW, Rowland Payne CM. Skin diseases in Ghana and the UK. International Journal of Dermatology. 2001;40(5):323-6
- [12]. Chua- Ty G, Goh CL, Koh SL. Pattern of skin diseases at the National Skin Centre (Singapore) from 1989–1990. International Journal of Dermatology. 1992;31(8):555-9
- [13]. El- Khateeb EA, Imam AA, Sallam MA. Pattern of skin diseases in Cairo, Egypt. International Journal of Dermatology. 2011;50(7):844-53
- [14]. Onayemi O, Isezuo SA, Njoku CH. Prevalence of different skin conditions in an outpatients' setting in north-western Nigeria. International Journal of Dermatology 2005;44(1):7-11
- [15]. Kamiabi F, Nakhai FH. Prevalence of pediculosis capitis and determination of risk factors in primary-school children in Kerman. EastMediterr Health J 2005; 115–6988–992
- [16]. Dogra S, Kumar B. Epidemiology of skin diseases in school children: a study from northern India. PediatrDermatol 2003; 20:470–473
- [17]. AbuTaha AS, Zyoud SH, Sweileh WM, Al-Jabi SW, AbuTaha AS, Zyoud SH, Anayah FMA, Sawalha AF. Bibliometric analysis of worldwide scientific literature in mobile - health: 2006-2016. Malaria research and treatment. 2017;17(1):72.
- [18]. Sweileh WM. Bibliometric analysis of literature on toxic epidermal necrolysis and Stevens-Johnson syndrome: 1940 - 2015. Orphanet journal of rare diseases. 2017;12(1):14.
- [19]. Sharma NL, Sharma RC. Prevalence of dermatological diseases in school children of a high-altitude tribal area of Himachal Pradesh. Indian J DermatolVenereolLepr. 1990; 56:375-6.
- [20]. Das K K. Pattern of dermatological diseases in Gauhati Medical College & Hospital, Guwahati. IJDVL 2003;69(1):16- 18.
- [21]. FawziaFaragMostafa, Aida Abdel Hamid Hassan, Mohamed Ibrahim Soliman, Amani Nassar, Randa Hassan Deabes Prevalence of skin diseases among infants and children in Al Sharqia Governorate, Egypt. EDOJ. 2012 June, Vol. 4(8):4.

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