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Pattern of skin diseases among nurses of Cumilla medical college hospital, Cumilla, Bangladesh

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Abstract
Introduction: The pattern of skin diseases differs from one country to another and crosswise diverse parts within the same country. There was not any specific data regarding the pattern of skin diseases of any specific community of Cumilla Medical College Hospital, Cumilla, Bangladesh.
Aim of the study: The aim of this study was to determine the pattern of skin disease among the nurses of Cumilla Medical College Hospital, Cumilla, Bangladesh.
Material & Methods: This was a retrospective type of study and it was conducted in the Department of Dermatology of Cumilla Medical College, Cumilla, Bangladesh during the period from January 2018 to December 2018. A total number of 302 nurses of the mentioned hospital were selected as the study population. Among them 26 patients were male and 276 patients were female. The skin diseases were grouped into specific skin diseases and non-specific skin diseases.
Results: In this study in infective diseases frequency we found majority 35 (11.59%) patients were with infected scabies. Then tinea infection in 33 (10.93%), pityriasis versicolor in 6 (1.99%), candidiasis in 3 (0.99%), pyoderma in 12 (3.97%), herpes zoster in 4 (1.32%), chicken pox in 3 (0.99%), herpes simplex in 4 (1.32%), warts in 6 (1.99%), TB skin in 1 (0.33%) and STD in 7 (2.32%). On the other hand, according to type of non-infective disease frequency we found Eczema emerged as the commonest group of disorders which was found in 36 (11.92%). Then vitiligo in 6 (1.99%), melasma in 5 (1.66%), psoriasis in 12 (3.97%), lichen planus in 5 (1.66%), alopecia in 7 (2.32%), acne vulgaris in 27 (8.94%), urticarial in 21 (6.95%) photosensitivity in 1 (0.33%), drug eruptions in 5 (1.66%), chronic bullous disease in 3 (0.99%), ichthyosis in 6 (1.99%), nevoid disorder in 9 (2.98%), connective tissue disease in 3 (0.99%) and miscellaneous in 42 (13.91%).
Conclusion: Among the infectious diseases we found most of the infective cases were with scabies and tinea infection. On the other hand, most of the non-infective cases were found with eczema only. These findings may be helpful for further studies.

Keywords: pattern, skin disease, dermatology, nurses

1. Introduction

Skin diseases are very much prevalent in the developing countries [1]. The pattern of skin diseases varies from one country to another and across different parts within the same country [2]. These diseases range from simple acne and scabies to various serious disorders such as Stevens Johnson syndrome, toxic epidermal necrolysis and purpura fulminans [3, 4] The prevalence of skin disease in the general population varies from 11.16 % to 63 % as seen in various studies [2]. Patients in their second and third decades of age form the largest group of population (3.7 percent to 51.17 percent) [5]. Skin diseases account for a significant public health issue in developing countries affecting 20-30% of the general population at any given time[6]. The development of Skin disease is influenced by various factors like genetic, race, religion, socioeconomic status, nutrition, personal habits, age etc [7]. Geographical factors such as season and climate also contribute to the increased prevalence of certain type of skin disorder in a particular area [8]. The pattern of skin diseases differs between countries and even within regions as a result of these factors [9]. Skin diseases can cause high morbidity but apparently less mortality. It is very important to remember that skin manifestations may be a clue as to the patient's internal disease, but literature on the pattern of skin diseases is deficient. Early identification of skin disease is important not only for treating patients but for preventing the spread of communicable diseases [1].

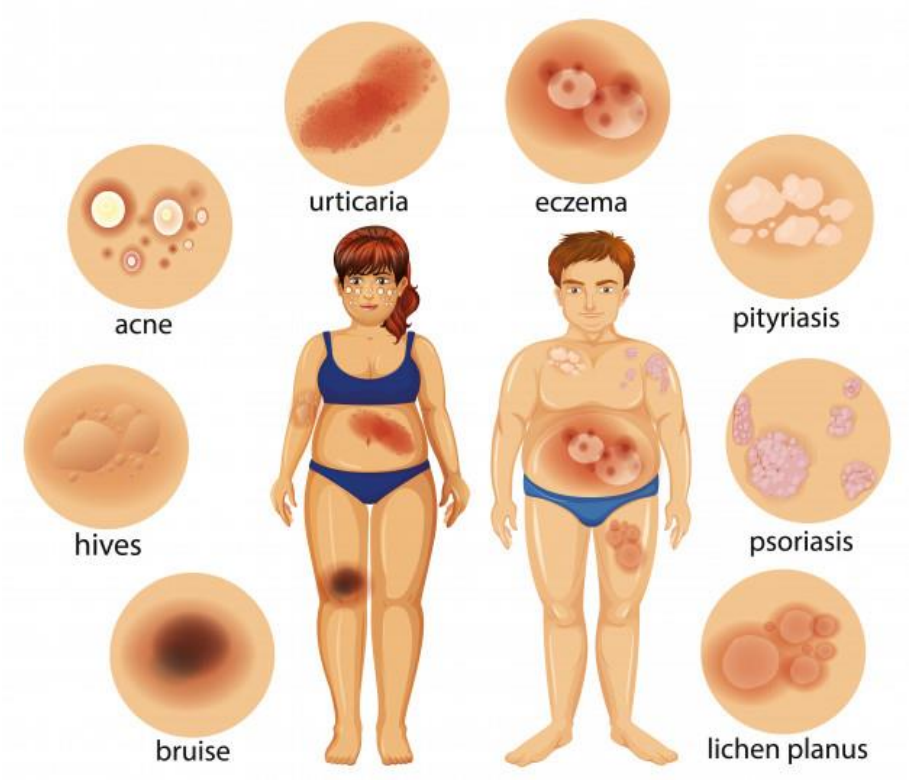

Fig I: Skin diseases (Source: Google)

Improvements to environmental sanitation, education of the general 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 developing nations. Prescription writing is a science and art, as its conveys the message from the prescriber to the patient.[10] Improvements to environmental sanitation, education of the general public and good nutrition can help to reduce the incidence of skin disorders in any community [1, 3, 11, 12]. Although there have been some studies on the pattern of skin diseases in the general global population, there is a paucity of such work in developing countries [11, 13, 14].

2. Objectives

a) General Objective

- To determine the pattern of skin disease among the nurses of Cumilla Medical College Hospital, Cumilla, Bangladesh.

b) Specific Objective

- To determine prevalence of infective and non-infective skin diseases among the participants.

3. Methodology and Materials

This was a retrospective type of study which was conducted at the Department of Dermatology of Cumilla Medical College of Bangladesh during the period from January 2018 to December 2018. A total number of 302 nurses of Cumilla Medical College Hospital of Bangladesh were selected as the study population. Among them 26 patients were male and 276 patients were female. The skin diseases were grouped into specific skin diseases and non-specific skin diseases. Cases with doubtful diagnosis were excluded from the study. Diagnosis was made on clinical basis. Lab investigations were done whenever required. The study was approved by the ethical committee of the mentioned medical college hospital. The proper written consent was obtained from all the participants before starting the main intervention.

4. Results

A total number of 302 patients had been selected for the study. In this study, we found 26 participants were male which was 9% of the total study people and 276 participants were female which was 91% of the total study people. So the female were dominating the number of study population. In analyzing the age of the participants, we found the highest 30.79% patients were from 41-50 years' age group followed by 29.14% were from 30-40%, 23.18% were from <30 years' age group and 16.89% were from 51-60 years age group. In this study in infective diseases frequency we found majority 35 (11.59%) patients were with infected scabies. Then tinea infection in 33 (10.93%), pityriasis versicolor in 6 (1.99%), candidiasis in 3 (0.99%), pyoderma in 12 (3.97%), herpes zoster in 4 (1.32%), chicken pox in 3 (0.99%), herpes simplex in 4 (1.32%), warts in 6 (1.99%), TB skin in 1 (0.33%) and STD in 7 (2.32%). On the other hand, according to type of non-infective disease frequency we found Eczema emerged as the commonest group of disorders which was found in 36 (11.92%). Then vitiligo in 6 (1.99%), melasma in 5 (1.66%), psoriasis in 12 (3.97%), lichen planus in 5 (1.66%), alopecia in 7 (2.32%), acne vulgaris in 27 (8.94%), urticarial in 21 (6.95%) photosensitivity in 1 (0.33%), drug eruptions in 5 (1.66%), chronic bullous disease in 3 (0.99%), ichthyosis in 6 (1.99%), nevoid disorder in 9 (2.98%), connective tissue disease in 3 (0.99%) and miscellaneous in 42 (13.91%). Finally we found in total 114 participants with infective skin diseases which was 38%

and 188 participants with non-infective skin diseases which was 62% among the total study population.

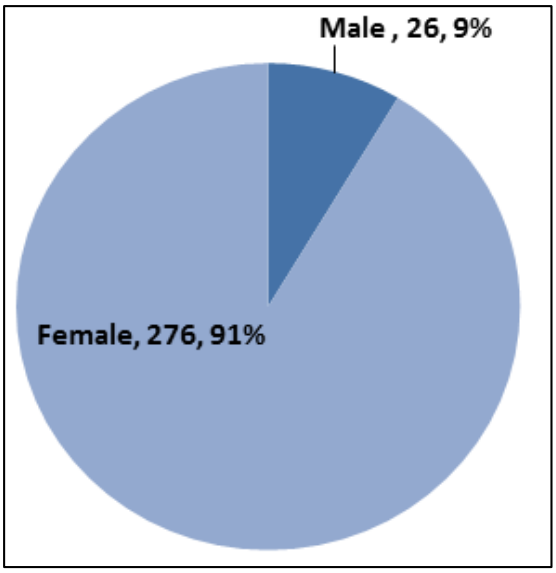

Fig 1: Distribution of patients according to gender (N=302)

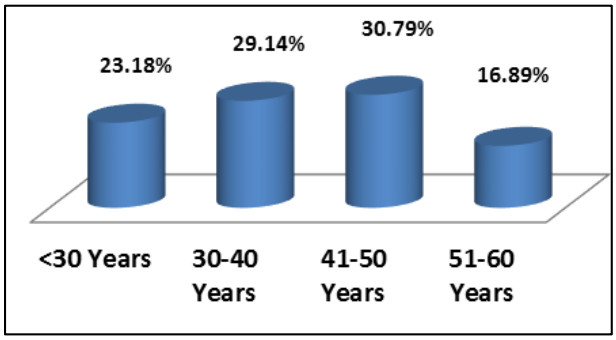

Fig 2: Age distribution of the participants (N=302)

Table 1: Distribution of infective disease frequency (N=302)

Infective Disease	n	%
Scabies	35	11.59
Tinea infection	33	10.93
Pityriasis versicolor	6	1.99
Candidiasis	3	0.99
Pyoderma	12	3.97
Herpes zoster	4	1.32
Chicken Pox	3	0.99
Herpes simplex	4	1.32
Warts	6	1.99
TB skin	1	0.33
STD	7	2.32
Total	114	37.75

NB. The patients with both infective as well as non-infective skin diseases were count in infective group.

Table 2: Distribution of non-infective disease frequency (N=302)

Non-infective Disease	n	%
Eczema	36	11.92
Vitiligo	6	1.99
Melasma	5	1.66
Psoriasis	12	3.97
Lichen Planus	5	1.66
Alopecia	7	2.32
Acne vulgaris	27	8.94
Urticaria	21	6.95
Photosensitivity	1	0.33
Drug eruptions	5	1.66
Chronic bullous disease	3	0.99
Ichthyosis	6	1.99
Nevoid disorder	9	2.98
Miscellaneous	42	13.91
Connective tissue disease	3	0.99
Total	188	62.25

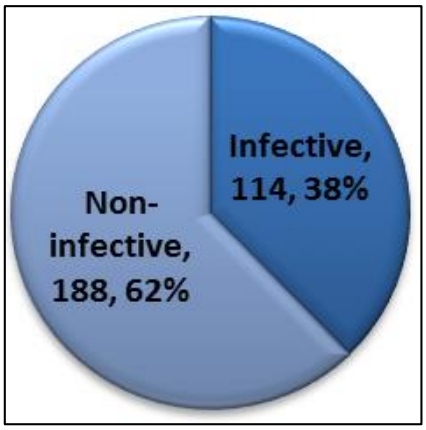

Fig 3: Ratio of infective & non-infective disease frequency (N=302)

5. Discussion

In this study we found, infective diseases (38%) were more than non-infective diseases (62%). In Indian sub-continent infectious skin diseases are more common than non-infectious diseases [15-17]. Although in Denmark, Egypt and in Singapore dermatoses are more common and in UK pre malignant and malignant skin diseases are more common [17-20]. In infectious disease parasitic diseases were more common. This is similar to Indian study [13, 22-24]. but differ from Singapore and Egyptian study [20, 19]. Regarding parasitic diseases scabies and pediculosis were most common. But in few Indian study they only mentioned about scabies was more prevalent [13, 21-23]. In this study, infective disease majority 11.59% were infected into scabies followed by tinea infection 10.93%, Pityriasis versicolor 1.99% and pyoderma 3.97% was found more common. This is similar to one Indian study [23]. In our study, non-infective disease eczema emerged as the commonest

Group of disorders 80(13.62%) followed by psoriasis 18(3.06%), acne vulgaris 53(9.02%), urticaria 36(6.13%) and miscellaneous 11.92%. About allergic skin disorders, eczema and photo dermatitis of our study are very similar to one study [1] but extremely dissimilar to another study [16] and urticaria is very close to another two. However, most of the result from the Indian subcontinent shows similar to the present study result. In a study Jain *et al* [9] have reported that fungal infections is the most common skin disease which is in 54.52% and eczemas is in 39.2%. Again, in another study by Rao *et al* [1] showed fungal diseases to be the most common infection (22.92%) and eczemas took an upper hand in noninfectious group (32.19%). Likewise, Jain *et al* [9] have reported that maximum patients presented with eczema of which the most common noninfectious dermatoses (22.0%) and fungal infections are the most common infective dermatoses (13%). However, in developed countries the scenario was different [17-20]. By review various reports, we find that almost all studies mentioned here [25-28] are compatible with our reports i.e., the commonest skin disease is of infective origin, followed by allergic diseases except two reports [29] which show the reverse situation. For infective dermatoses, by reviewing different studies [25]. it is clear that the fungal or bacterial infections are the commonest infective skin disorder, instead of parasitic and protozoal infestations of our study.

6. Limitations of the study

It was a retrospective type of study with small sample size, which may not reflect the exact scenario of the whole country.

7. Conclusion and recommendations

A huge problem of skin diseases is existing mostly bacterial and parasitic. Among the infectious diseases we found most of the infective cases were with scabies and tinea infection. On the other hand, most of the non-infective cases were found with eczema only. Based on the outcome of this study, the common skin problems existing in this area are to be carefully looked for and health education regarding the hygiene, nutrition and healthy life styles is to be stressed for better standard of living.

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