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Study of Pattern of Skin Disease in Patients Attending OPD of Dermatology and Venereology Department in Sher-e-Bangla Medical College Hospital, Barisal, Bangladesh.

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Abstract
Introduction: *Skin diseases are one of the most common health problems seen in the developing countries. It is generally agreed that the pattern of skin diseases differs in different countries, and various factors like environment, economy, literacy, racial and social customs.*
Objective: *To assess the pattern of skin diseases in Sher-e-Bangla Medical College Hospital, Barisal, Bangladesh.*
Material & Methods: *This cross-sectional study was conducted in outpatient department of Dermatology and venereologyin Sher-e-Bangla Medical College Hospital, Barisal, Bangladesh. During the period of one year starting from January, 2018 to December 2018 were included in the study. A total of 34,583 patients visited OPD for skin and Veneral diseases during the tenure of the study. Among them 28,967 were newly diagnosed patients selected as study participants. 14,012 patients were male and 14,955 patients were female.*
Results: *A total number of 5,807 cases were parasitic diseases of which 5,682(97.84%) cases were scabies and 125(2.15%) cases were pediculosis. Out of 4370 fungal diseases tineacapitis, tineacorporis, tineacruris, candidiasis, onychomycosis and pityriasisversicolor were found in 216(4.94%) cases, 2285(52.28%) cases, 647(14.80%) cases, 509(11.64%) cases, 301(6.88%) cases and 412(9.42%) cases respectively. Out of 2892 bacterial diseases Impetigo was found in 832(28.73%) cases, pyoderma in 896(30.98%) cases, folliculitis in 1153(39.80%) cases, leprosy in 7(0.24%) cases and skin TB in 5(0.17%) cases. Among the viral 1158(7.38%) disease's verruca was found in 547(47.23%) cases, Herpes simplex was in 277(23.92%) cases, Herpes zoster was in 67(5.78%) cases, Molluscumcontagiosum was in 188(16.23%) cases, Varicella was in 56(4.83%) cases and Measles was in 23(1.98%) cases. Among 579(3.69%) sexually transmitted infection (STI) cases nonspecific urethritis was found in 294(50.77%) cases, Gonococcal urethritis was in 53(9.15%) cases and Others STI was found in 232(40.06%) cases. Other non-specific skin infection 869(5.54%) were found in this study. Among 6952 eczema cases Seborrheic dermatitis was found in 1752(25.20%) cases, Pompholyx was in 828(11.91%) cases, Lichen simplex chronicus was in 695(9.99%) cases, Atopic dermatitis was in 1262(18.15%) cases, contact dermatitis was in 2070(29.77%) cases and undetermined type was in 345(4.96%) cases. Among 629 cases of Papulo Squamous Disease, Psoriasis was found in 285(45.31%) cases, lichen planus was in 212(33.70%) cases, pityriasisrosea was in 93(14.78%) cases and others was in 39(6.20%) cases. Acne was found in 2896(21.78%) cases, Urticaria 1158(8.71%), vitiligo295 (1.09%). Among Neoplastic skin disorder 145(1.09%) cases,Premalignant was found in 127(87.59%) cases and Malignant was found in 18(12.41%) cases. Among Genodermatoses 212(1.59%) cases, ichthyosis was found in 145(68.39%) cases. Neurofibromatosis was found in 28(13.20%) cases. Others were in 39(18.39%) cases respectably.*
Conclusion: *A massive burden of skin diseases is existing mostly bacterial and parasitic. Among the infectious disease's scabies, tineacorporis impetigo, pyoderma and verruca are the most common infection. Among sexually transmitted infection (STI), nonspecific urethritis and gonococcal urethritis are frequently found in this study.*

Key Words:*Sexually Transmitted Infection (STI), Skin Diseases, Parasitic Diseases, Scabies, Eczema.*

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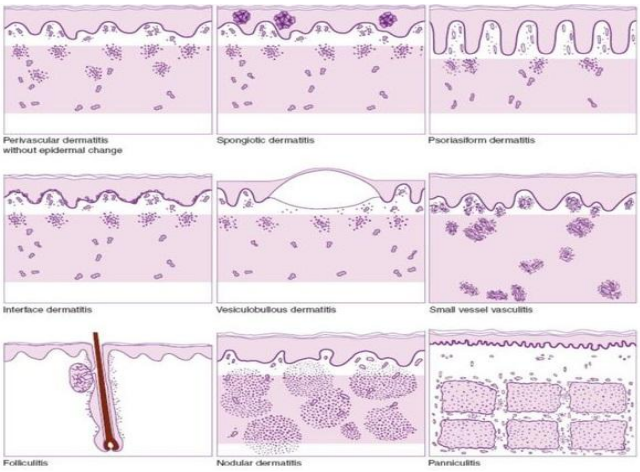
I. Introduction

Skin problems are one of the most communal health problems seen in the developing countries. Skin diseases are also influenced by various factors like environment, economy, literacy, racial and social customs. The pattern of skin diseases differs from one country to another country and in several regions within the same



country. Each individual suffers from skin disease at some point in his life.[1] Skin diseases affect all ages from neonate to the elderly [2]. Its sources harm in a number of ways and can have a deep effect on both the individual and the community. Disease is significant through disfigurement, disability or symptoms such as inflexible itch impairs quality of life, even social separation and economic burden [3]. Types of skin diseases were influenced by several influences like genetic, race, religion, occupation, nutrition and habits [4]. In developing countries 70% of the people suffer from skin diseases in some chunk of their life [5]. Many do not have access to basic skin services and even in established countries 15% of the patients apply home remedies before proper medical services [6]. Keeping in interpretation the reputation of health issues associated to skin it is significant to devise means and measures to evaluation the burden of disease which affects not only the patient's life but also their families and society. Many of the skin infections are endemic in developing countries. However, the epidemiology of these diseases is incompetently unstated in many areas, particularly in Bangladesh [7]. This article is also an attempt to discover some approaches for the upcoming of appropriate administration of skin diseases in Bangladesh. Bangladesh is recognized to have a high prevalence of skin diseases. As reported by the Directorate General Health Services (DGHS) [8], figures range from 5.3% (1990) to as high as 12.9% (1995) among patients at the region level or below hospitals. The similar report mentions skin diseases as one of top ten leading cause of morbidity amongst the Bangladeshis. In an earlier publication from the same basis, it was described that skin disease produced morbidity to the tune of 10.1% and 9.3% in 1988 and 1989 respectively [9]. In addition, there is a need to produce consciousness between public and primary health care providers to teach people about preventive characteristics related to skin diseases so that the burden of disease can be minimized [10]. As the pattern of skin diseases varies in different parts of a country, the aim of this study was to assess the pattern of skin diseases.

II. Objectives

General objective:

To assess the pattern of skin diseases in Sher-e-Bangla Medical College Hospital, Barisal, Bangladesh.

III. Methodology And Materials

This cross-sectional study was conducted in outpatient department of Dermatology and venereologyin Sher-e-Bangla Medical College Hospital, Barisal, Bangladesh. During the period of one year starting from January, 2018 to December 2018 were included in the study. A total of 34583 patients visited OPD for skin and veneral diseases.

Twenty eight thousand nine hundred and sixty seven (28967) newly diagnosed patients at any age and sex who were attended in the OPD of the hospital were selected as study population. Among them, 14012 patients were male and 14955 patients were female. The skin diseases were grouped into Infectious skin diseases and non-Infectious skin diseases. Cases with doubtful diagnosis were excluded from the study. Diagnosis was made on clinical basis. Lab investigations were done whenever required. Restricted to the cases where it carried diagnostic importance.

IV. Results

A total number of 28967 patients had selected for the study. (Table I) shows the educational status of our patients, maximum patients (32.68%) were educated or studied up to class X,followed by (23.99%) patients were educated or studied up to class V, 18.95% were educated or studied up to classXI to XII, 18.35% were illiterate, 5.99% were graduate or above. (Table II)A total number of 5807 cases were parasitic diseases of which 5682(97.84%) cases were scabies and 125(2.15%) cases were pediculosis. Out of 4370 fungal diseases tineacapitis, tineacorporis, tineacruris, candidiasis, onychomycosis and pityriasisversicolor were found in 216(4.94%) cases, 2285(52.28%) cases, 647(14.80%) cases, 509(11.64%) cases, 301(6.88%) cases and 412(9.42%) cases respectively. Out of 2892 bacterial cases, Impetigo was found in 832(28.73%) cases, pyoderma in 896(30.98%) cases, folliculitis in 1153(39.80%) cases, leprosy in 7(0.24%) cases and skin TB in 5(0.17%) cases.Among the viral 1158(7.38%) cases, verruca was found in 547(47.23%) cases, Herpes simplex was in 277(23.92%) cases, Herpes zoster was in 67(5.78%) cases, Molluscumcontagiosum was in 188(16.23%)

cases, Varicella was in 56(4.83%) cases and Measles was in 23(1.98%) cases.Among 579(3.69%) sexually transmitted infection (STI) cases, nonspecific urethritis was found in 294(50.77%) cases, Gonococcal urethritis was in 53(9.15%) cases and others was found in 232(40.06%) cases. Other non-specific skin infection 869(5.54%) were found in this study.Among 6952 eczema cases, Seborrheic dermatitis was found in 1752(25.20%) cases, Pompholyx was in 828(11.91%) cases, Lichen simplex chronicus was in 695(9.99%) cases, Atopic dermatitis was in 1262(18.15%) cases, contact dermatitis was in 2070(29.77%) cases and undetermined type was in 345(4.96%) cases. Among 629 cases of Papulo Squamous Disease, Psoriasis was found in 285(45.31%) cases, lichen planus was in 212(33.70%) cases, pityriasisrosea was in 93(14.78%) cases and Others was in 39(6.20%) cases. Acne was found in 2896(21.78%) cases. Urticaria was found in 1158(8.71%) cases. Vitiligo was found in 295(2.21%) cases. Among Neoplastic skin disorder 145(1.09%) cases, Premalignant was found in 127(87.59%) cases and Malignant was found in 18(12.41%) cases. Among Genodermatoses 212(1.59%) cases,Ichthyosis was found in 145(68.39%) cases. Neurofibromatosis was found in 28(13.20%) cases and others were in 39(18.39%) cases respectably.

Figure I: Sex Distribution of the studied participants. (n=28967)

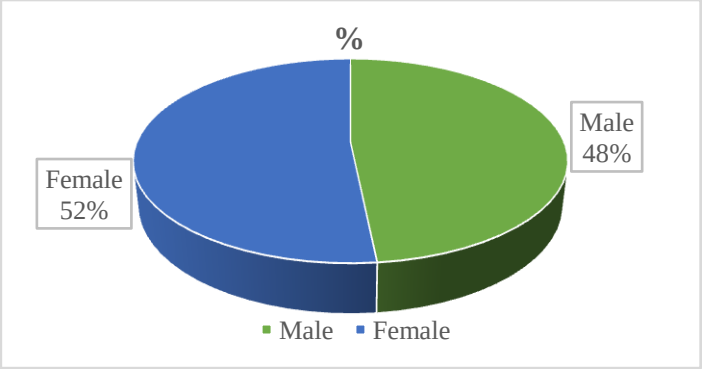


Table I: Distribution of patient according to educational Status. (n=15675)

Education	N	%
Illiterate	5317	18.35
Up to class (v)	6952	23.99
SSC	9469	32.68
HSC	5491	18.95
Graduate and above	1738	5.99

Figure II: Shows the distribution of patient according to educational Status. (n=28967)

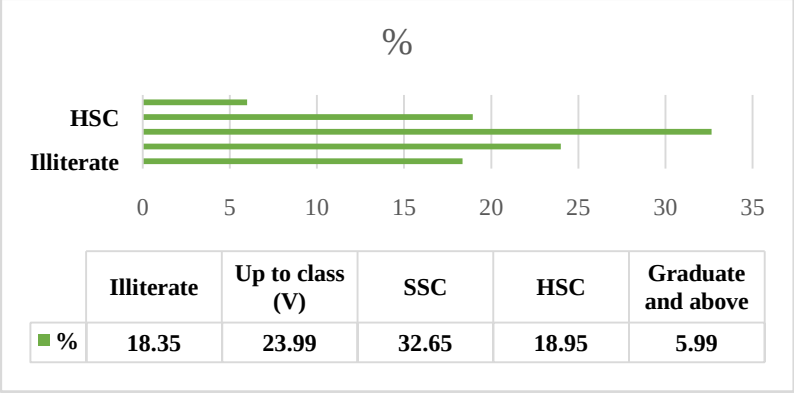


Table II: Distribution of patient's according to type of infective disease. (n=28967)

	Infective Disease	N	%
•	**Parasite**	(5807)	(37.04)
a)	Scabies	5682	97.84
b)	Pediculosis	125	02.15
•	**Fungal**	(4370)	(27.87%)
a)	TINEA capitis	216	04.94
b)	TINEA corporis	2285	52.28
c)	TINEA cruris	647	14.80
d)	Candidiasis	509	11.64

e)	Onychomycosis	301	06.88
f)	Pityriasisversicolor	412	09.42
•	**Bacterial**	(2892)	(18.44%)
a)	Impetigo	832	28.73
b)	Pyoderma	896	30.98
c)	Folliculitis	1153	39.80
d)	Leprosy	7	00.20
e)	Skin TB	5	00.17
•	**Viral**	(1158)	(07.38)
a)	Verruca	547	47.23
b)	Herpes Simplex	277	23.92
c)	Herpes Zoster	67	05.78
d)	Molluscumcontagiosum	188	16.23
e)	Varicella	56	04.83
f)	Measles	23	01.98
•	**STI**	(579)	(03.69)
a)	Non-specific urethritis	294	50.77
b)	Gonococcal urethritis	53	09.15
c)	Others	232	40.06
• **infection**	**Other non-specific skin**	**869**	05.54%

Table III: Distribution of the patients according to type of non-infective disease. (n=28967)

	Non-Infective Disease	N	%
•	**Eczema**	(6952)	(52.30%)
a)	Seborrheic dermatitis	1752	25.20
b)	Contact dermatitis	2070	29.77
c)	Atopic dermatitis	1262	18.15
d)	Pompholyx	828	11.91
e)	Lichen simplex chronicus	695	9.99
f)	Undetermined type	345	4.96
•	**Papulo Squamous Disease**	(629)	(04.73%)
a)	Psoriasis	285	45.31
b)	Lichen planus	212	33.70
c)	Pityriasisrosea	93	14.78
d)	Others	39	06.20
•	**Acne**	(2896)	(21.78%)
a)	Urticaria	1158	08.71%
b)	Vitiligo	295	02.21%
•	**Neoplastic skin disorder**	(145)	(01.09%)
a)	Premalignant	127	87.59
b)	Malignant	18	12.41
•	**Genodermatoses**	(212)	(01.59%)
a)	Ichthyosis	145	68.39
b)	Neurofibromatosis	28	13.20
c)	Others	39	18.39
	Other non-infective disease	**1005**	**07.56%**

V. Discussion

A total number of 28967 patients were recruited forthis study who were presented with skin and Veneraldiseasesin *Sher-e-Bangla Medical* College Hospital, Barisal Bangladesh. Educational status of the most of the patients was SSC which was 32.7% cases followed by up to class five, HSC, illiterate and graduate with above. This is similar to in a study by Karet al[11]except in that study most of the patients were under V class (22.35%). In this study we found, maximum patients (32.68%) were educated or studied up to class X, followed by (23.99%) patients were educated or studied up to class V, 18.95% were educated or studied up to class XI to XII, 18.35% were illiterate, 5.99% were graduate or above.In infectious disease parasitic diseases were more common. This is alike to Indian study[11,12,13,14]but vary from Singapore and Egyptian study [15,16]. Regarding parasitic diseases scabies were most common. Like few Indian studies, they only mentioned about scabies was more prevalent[11,12,13,14]. Out of 4370 fungal diseases tineacapitis, tineacorporis, tineacruris, candidiasis, onychomycosis and pityriasisversicolor were found in 216(4.94%) cases, 2285(52.28%) cases, 647(14.80%) cases, 509(11.64%) cases, 301(6.88%) cases and 412(9.42%) cases respectively. This is similar to one Indian study[11]. In one Egyptian study among fungal subgroup pityriasisversicolor is most common[16]. Among 2892 bacterial diseases Impetigo was found in 832(28.73%) cases, pyoderma in 896(30.98%) cases, folliculitis in 1153(39.80%) cases, leprosy in 7(0.24%) cases and skin TB in 5(0.17%) cases. This result quite similar to Indian[11] and Egyptian[16] study except in Indian study the number of leprosy cases are much higher in that study

(17.56%). Among the viral 1158(7.38%) disease's verruca was found in 547(47.23%) cases, Herpes simplex was in 277(23.92%) cases, Herpes zoster was in 67(5.78%) cases, Molluscumcontagiosum was in 188(16.23%) cases, Varicella was in 56(4.83%) cases and Measles was in 23(1.98%) cases Respectively. This is similar to other Indian[11] and Egyptian[16] studies but differ from Singaporean[15] studies. Among 579(3.69%) sexually transmitted infection (STI) cases nonspecific urethritis was found in 294(50.77%) cases, Gonococcal urethritis was in 53(9.15%) cases and Others STI was found in 232(40.06%) cases. In one Indian[11] study gonococcal urethritis (52.24%) is more common than syphilis (34%). Whereas in a study in Denmark[17] non-Infective dermatitis is more common, like atopic dermatitis followed by seborrheic dermatitis.In India Das and Chatterjee [18] have found eczema (23.1%), pyoderma (14.29%), fungal infections (14.24%) and psoriasis (7.7%) are the major skin diseases in that part of country. In another study it has been found that eczema (17.48%), fungal (17.19%), pyoderma (9.1%) and scabies (8.97%) are the major pattern of skin morbidities. Fungal diseases (20.6%) were the commonly found infection among children reported by Yasmeen and Khan in their study in Pakistan.[19]Among 6952 eczema cases of our study Seborrheic dermatitis was found in 1752(25.20%) cases, Pompholyx was in 828(11.91%) cases, Lichen simplex chronicus was in 695(9.99%) cases, Atopic dermatitis was in 1262(18.15%) cases, contact dermatitis was in 2070(29.77%) cases and undetermined type was in 345(4.96%) cases, which resemble the previous studies.

Limitations of the study

It was a cross-sectional type ofstudy with small sample size, which doesn't reflect the scenario of the whole country.

VI. Conclusion And Recommendations

A massive burden of skin diseases is existing mostly bacterial and parasitic. Among the infectious disease's scabies, tineacorporis, impetigo, pyoderma and verruca are the most common infection. Among sexually transmitted infection (STI), nonspecific urethritis and gonococcal urethritis are frequently found in this study. This huge burden of dermatological diseases should be properly managed and cure to prevent the contamination to others. This study gives a fair picture of pattern of common skin diseases. From this study, it can be concluded that better health education, maintaining personal hygiene, improvement in the standard of living, proper case diagnosis and proper treatment may remain of importance in managing common skin diseases.

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