

## ORIGINAL ARTICLE

## Pattern of Skin Diseases at Bahawal Victoria Hospital, Bahawalpur

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## ABSTRACT

**Objective:** The purpose of this study was to analyze the spectrum of skin disorders in patients attending outpatient Department (OPD) of Dermatology in Bahawal Victoria Hospital, Bahawalpur.**Study Design:** Cross sectional study.**Place and Duration:** Dermatology OPD of Bahawal Victoria Hospital, Bahawalpur from 1<sup>st</sup> January 2018 to 31<sup>st</sup> march 2018.**Methodology:** Total 1816 patients presenting in Dermatology OPD during this period were included in the study after taking informed consent. Patients with undiagnosed dermatosis were excluded from the study. The diseases were categorized into 10 etio-pathological groups and their frequencies were calculated using SPSS version 21.**Results:** A total of 1816 patients were enrolled in the study. Among the study population, infections and infestations were the most common n=1068 (59%) followed by eczemas n=450 (24.9%) and appendigeal disorders n=268 (14.6%).**Conclusion:** communicable skin diseases are most common and massive campaigns regarding public awareness and health reforms from the public sector are required to overcome the situation and decrease the health care burden.**Keywords:** Pattern, skin disorders, infections, infestations

## INTRODUCTION

Skin diseases have a significant effect on the quality of life. They range from various cosmetic problems to multiple disfiguring and fatal diseases.<sup>1</sup> The spectrum of skin diseases in any area is dependent on a number of factors like weather conditions, average socio economic status of population, geographical location, literacy rate, nutritional status & traditional trends.<sup>2</sup> In the developing countries, the prevalence of cutaneous diseases varies from 6.3 to 11.2%.<sup>2,3</sup>

The pattern of skin diseases differs from country to country as well as within the cities and towns.<sup>4</sup> Pakistan is a large country with diverse geographical, environmental, socio economic and nutritional factors which influence the pattern of the skin disorders.<sup>1</sup> It is also affected by the distance to be travelled to reach the health care unit/personnel.<sup>5</sup>

Although skin diseases are highly prevalent in our community, they are not perceived to be significant health concern. An in depth knowledge of the magnitude of the skin problems in any area is required for the proper understanding of the burden of skin disorders in the community.<sup>6</sup> This study was conducted at Bahawal Victoria Hospital, Bahawalpur, with a view to estimate the types of dermatosis that are more prevalent in plain areas of south Punjab. It may also help in proper understanding of the magnitude of skin disorders and to formulate a plan to deal with the most prevalent skin disorders and raise public awareness regarding prevention of the skin disorders.

## MATERIALS AND METHODS

It was a hospital based descriptive study carried out at Dermatology Outpatient Department of Bahawal Victoria Hospital, Bahawalpur from 1<sup>st</sup> Jan, 2018 to 31<sup>st</sup> Mar, 2018. After informed consent, all patients of either sex and any age presenting in dermatology OPD were included. Patients with inconclusive diagnosis were not considered. Diagnosis was based on detailed history and clinical examination. Investigations like complete blood count, urine complete examination, renal and liver function tests, smear for fungal hyphae and LT bodies and skin biopsies were performed, when required. The diseases were grouped into ten etio-pathological groups, and their frequencies were determined. Data was analyzed using SPSS version 21.

## RESULTS

A total of 1816 patients were included in the study. Out of which 1078 were females and 738 were males. The age ranged from

neonate to 90 years (25.41±16.51). most common presenting age group was 21-30 years.

Table 1: Frequencies of different skin disorders

	Disease	Frequency(n)	Percentage%
1.	Eczemas	450	24.9%
2.	Appendigeal Disorders	268	14.6%
3.	Parasitic Disorders	235	13%
4.	Fungal Disorders	232	12.8%
5.	Pigment Disorders	215	11.9%
6.	Vascular and Reactive Disorders	126	6.8%
7.	Disorders of Keratinization	110	6%
8.	Viral Infections	107	5.9%
9.	Bacterial Infections	44	2.4%
10.	Miscellaneous Dermatosis	29	1.7%
	Total	1816	100

Table 2: infections and infestations

	Disease	Frequency(n)	Percentage%
	<b>Parasitic infestations</b>		
1.	Scabies	223	12.3%
2.	Pediculosis	10	0.6%
3.	Cutaneous leishmaniasis	2	0.1
	<b>Fungal infections</b>		
1.	Tenia Capitis	43	2.4%
2.	Tenia Corporis	43	2.4%
3.	Tenia Cruris	42	2.3%
4.	Pytriasis versicolor	37	2%
5.	Tenia Faciei	24	1.3%
6.	Candidiasis	11	0.6%
7.	Angular cheilitis	8	0.4%
8.	Tenia pedis	7	0.4%
9.	Onychomycosis	7	0.4%
10.	Tenia unguam	6	0.3%
11.	Tenia Manum	3	0.2%
12.	Mycetoma	1	0.1%
	<b>Viral infections</b>		
1.	Herpes zoster	26	1.4%
2.	Warts	24	1.3%
3.	Molluscum contagiosum	22	1.2%
4.	Herpes simplex	14	0.8%
5.	Chicken pox	11	0.6%
6.	Post herpetic neuralgia	9	0.5%
7.	Viral exenthemas	1	0.1%
	<b>Bacterial infections</b>		
1.	Furunculosis	20	1.1%
2.	Folliculitis	14	0.8%
3.	Cellulitis	6	0.3%
4.	Impetigo	4	0.2%
	Total	1068	59%

Infections and infestations were the most commonly presenting group of skin disorder constituting n=1068 (59%) of the study population. (Table 2) Next in frequency were eczema n=450 (24.9%) patients. (table 3) followed by appendigeal disorders n=268 (14.6%), disorders of pigmentation n=215 (11.9%), vascular and reactive dermatosis n=126 (6.8%), keratinization disorders n=110 (6%), and miscellaneous dermatosis n=29 (1.7%). (table 1).

Among infections and infestations, scabies was the most common n=235 (12.3%) followed by Fungal infections which were n=232 (12.2%), viral infections which were n=107 (5.9%) and bacterial infections were n=44 (2.4%). Dermatophytic infections were the most common of the fungal infections. Among dermatophytes, *Tenia Capitis* n=43 (2.4%) and *Tenia Corporis* n=43 (2.4%) were most common dermatosis. (Table 2). Herpes zoster n=26 (1.4%) was the most prevalent among viral infections. Furunculosis was seen in n=20 (1.1%) of patients. 198 (10.9%) patients presented with acne, 128 (7%) with Seborrhoeic dermatitis, 116 (6.4%) with melasma and 28 (1.5%) with Keratoderma. Table 3,4,5,7

Table 3: eczemas

	Disease	Frequency (n)	Percentage %
1.	Contact Dermatitis	150	8.3%
2.	Seborrhoeic Dermatitis	128	7%
3.	Atopic Dermatitis	55	3%
4.	Chronic Eczema	33	1.8%
5.	Acute Eczema	22	1.2%
6.	Pytriasis Alba	17	0.9%
7.	Actinic Reticuloid	16	0.9%
8.	Photo Contact Dermatitis	12	0.7%
9.	Infected Eczema	5	0.3%
10.	Diaper Dermatitis	4	0.2%
11.	Pytriasis Rosea	3	0.2%
12.	Infective Eczema	3	0.2%
13.	Perianal Dermatitis	2	0.1%
	Total	450	24.9%

Table 4: Appendigeal disorders

	Disease	Frequency(n)	Percentage%
1.	Acne	198	10.9%
2.	Alopecia Arreata	17	0.9%
3.	Milias	17	0.9%
4.	Diffuse Hair Loss	14	0.7%
5.	Rosacea	6	0.3%
6.	Appendigial Tumors	5	0.3%
7.	Hirsuitism	4	0.2%
8.	Androgenetic Alopecia	3	0.2%
9.	Hydradenitis Suppurativa	2	0.1%
10.	Acrocordon	2	0.1%
	Total	268	14.6%

Table 5: pigment disorders:

	Disease	Frequency (n)	Percentage %
1.	Melasma	116	6.4 %
2.	Freckles	44	2.4 %
3.	Post-Inflammatory Hyperpigmentation	23	1.3 %
4.	Vitiligo	20	1.1 %
5.	Congenital Nevus	6	0.3 %
6.	Xeroderma Pigmentosum	3	0.2 %
7.	Lentiginosis	3	0.2 %
	Total	215	11.9 %

Table 6: vascular and reactive dermatosis:

	Disease	Frequency (n)	Percentage %
1.	Urticaria	60	3.3 %
2.	Insect Bite Reaction	14	0.8 %
3.	Keloid	13	0.7 %
4.	Connective Tissue Disease	10	0.5%
5.	Heamangioma	9	0.5 %
6.	Fixed Drug Eruption	8	0.8 %
7.	Chillblains	6	0.3 %
8.	Pompholyx	4	0.2 %
9.	Vasculitis	2	0.1 %
	Total	126	6.8 %

Table 7: disorders of keratinization:

	Disease	Frequency (n)	Percentage %
1.	Psoriasis	36	2 %
2.	Keratoderma	28	1.5 %
3.	Lichen Planus	24	1.3 %
4.	Ichthyosis	7	0.4 %
5.	Ectodermal Dysplasia	6	0.3 %
6.	Erythroderma	5	0.3 %
7.	Pytriasis Rosea	4	0.2 %
	Total	110	6 %

Table 8: Miscellaneous:

	Disease	Frequency (n)	Percentage %
1.	Burn	10	0.6 %
2.	Bullous Pemphoigoid	6	0.3%
3.	Aphthosis	5	0.3 %
4.	Neurofibromatosis	5	0.3 %
5.	Epidermolysis Bullosa	3	0.2 %
	Total	29	1.7 %

## DISCUSSION

The spectrum of skin diseases in any area is determined by multiple factors like literacy rate, socioeconomic status and geographical location. Different pattern of skin diseases is seen in different areas of the world as well as with in the same country.<sup>6,7</sup> Our study showed that infestations and infective skin conditions were the most common n=1068 (59%). Among these, scabies was the most common n=223 (12.3%). This is similar to the results of the studies conducted in various regions of Pakistan.<sup>2,7,8</sup> In our study, among infections and infestations next in frequency are dermatophytic infections among which *Tenia Corporis* and *Tenia Cruris* n=43 (2.4%) were most prevalent, Herpes zoster n=26 (1.4%) and furunculosis n=20 (1.1%) are other common viral and bacterial infections. This pattern was comparable to many other studies conducted in different parts of Pakistan like Lahore and Karachi and also in different regions of the world.<sup>7-11</sup> However, in a study from Faridpur region of Bangladesh by Sarkar SK et al, there was higher incidence of some non-infective skin conditions i.e 56.71% as compared to infective skin conditions which were 43.29%.<sup>12</sup> Humera reported a lower incidence of fungal and viral infections 3% and 2% respectively from Karachi, as compared to our study.<sup>1</sup>

This study showed that most common viral infections was Herpes zooster n=26 (1.4%) followed by viral warts n=24(1.3%). Among bacterial infections, furunculosis was the most common disease n=20(1.1%). Other studies reported bacterial infections with different frequencies, Balai et al reported bacterial diseases as the most predominant infections<sup>13</sup>. However, Yasmeen and Khan reported fungal diseases as the most predominant infections.<sup>8</sup> Yamama et al reported parasitic infestations (pediculosis capitis) as major dermatosis.<sup>14</sup> The higher incidence of skin infections in our area may be due to poor literacy rate, low socio-economic status and over-crowding of population.

Among non-infective skin conditions, eczema was the most common disease. n=450 (24.9%). Seborrhoeic dermatitis was the most common type of eczema n=120 (7%). However, in a study from Karachi, Atopic dermatitis was the most frequent type of eczema [18%], followed by Seborrhoeic dermatitis 5%.<sup>1</sup> Devi TB et al from India reported eczemas a less frequent disorder i.e. 17.4% as compared to this study.<sup>9</sup> Tameezuddin et al reported an even less frequency of eczema 13.9% as compared to our study.<sup>10</sup> This high frequency of eczema in our study might be due to high prevalence of seborrhea and various allergens in our region. However, Humera et al<sup>1</sup> from Karachi and Raddadi et al from Saudia<sup>11</sup> reported eczemas as the most frequent non-infective dermatosis.

The frequency of Acne in our study was n=190 (10.9%) which is lower than the frequency of Acne reported in studies from Karachi<sup>1</sup> and Rawalpindi<sup>10</sup>. In present study, the frequency of melasma was n=116 (6.4%) which is comparable to that reported in a study from Muzaffarabad.<sup>2</sup> The frequency of urticaria was

n=60 (3.3%) which is less as compared to that reported from studies from other parts of the country.<sup>1,10</sup>

Among papulosquamous disorders, psoriasis was the most common disease as seen in various studies from India.<sup>5,12,17</sup>

The frequency of chill blain was 0.3%, which is less as compared to that seen in Muzaffarabad<sup>2</sup>, most likely due to less extreme weather conditions as compared to the hilly areas.

Spectrum of skin diseases is affected by multiple factors like health awareness, personnel hygiene, educational status, family background and traditional taboos.<sup>2</sup> so it varies from country to country as well as with in different regions of the same country. The data in this study comparable to various local and international studies conducted in places with similar landscape and geographic distribution.

## CONCLUSION

The spectrum of skin disorders is comparable in different regions of our country with minor differences, and infestations and infective skin disorders are the most common dermatosis which can be prevented. Mass reforms from the government sector are required to enhance public health awareness, improve hygiene and living standards and to provide early and effective treatment to the patients. Although the scope of the study was very limited but still we believe that it does give a rough idea as to what types of preventive measures should be taken to decrease the health care burden in skin OPD's. A bigger scale study is required to more accurately analyze the problem and act proactively so that at least preventable skin disorders that make up the major bulk should be prevented, thereby decreasing a lot of health care budget that can be used for other life threatening conditions.

## REFERENCES

- Maryam H, Alam MZ, Ahmed I. Pattern of skin diseases in a tertiary care private hospital, Karachi. *J Pak Asso Dermatol*.2014;24(4):292-297.
- Fasih S, Arif AB, Younas S. Pattern of Skin Diseases in Abbass Institute of Medical Sciences, Muzaffarabad.Pak *J Physiol* 2017;13(4):26-9.
- Patro BK, Tripathy JP, Sinha S, Singh A, De D, Kanwar A. Diagnostic agreement between a primary care physician and a teledermatologist for common dermatological conditions in North India. *Indian Dermatology Online Journal*. 2015;6(1):21–26.
- Grover S, Ranyal RK, Bedi MK. A cross section of skin diseases in rural Allahabad. *Indian J Dermatol*. 2008;53:179-81
- Agarwal S, Sharma P, Gupta S, Ojha A. Pattern of skin diseases in Kumaun region of Uttarakhand. *Indian Journal of Dermatology, Venereology and Leprology*.2011: 77(5):603-604. doi: 10.4103/0378-6323.84073
- Gupta A, Chellaiyan V, Lohiya A, Rizwan SA, Upadhyay RP, Palanivel C. Morbidity profile of out-patients attending a primary health centre in rural Puducherry, south India. *National Journal of Community Medicine*. 2014;5(4):424–427.
- Muzaffar F. Pattern of skin diseases at The Children's Hospital, Lahore: comparison between 1996-1998 and 2011. *Journal of Pakistan Association of Dermatologists* 2012;22 (3):230-235.
- Yasmeen N, Khan MR. Spectrum of common childhood skin diseases: A single centre experience. *JPMA* 2005;55:60-3.
- Devi TB, Zamzachin G. Pattern of skin diseases in Imphal. *Indian J Dermatol*. 2006;51:149-50
- Tameez-Ud-Din, Butt AQ, Bangash FA, Abbas H. Burden of skin diseases at a tertiary care hospital. *J Rawalpindi Med Coll*. 2010;14:90-2.
- Raddadi AA, Abdullah SA, Damanhoury ZB. Pattern of skin diseases at King Khalid National Guard Hospital: A 12- month prospective study. *Ann Saudi Med*.1999;19:453-4.
- Sarkar SK, Islam AK, Sen KG, Ahmed AR. Pattern of skin diseases in patients attending OPD of Dermatology department at Faridpur Medical college hospital, Bangladesh. *Faridpur Med Coll J*. 2010;5(1):14-16
- Balai M, Khare AK, Gupta LK, Mittal A, Kuldeep CM. Pattern of pediatric dermatoses in as tertiary care centre of South West Rajasthan. *Indian J Dermatol*. 2012;57(4):275.
- Yamama GA, Emam HM, Abdelhamid MF, Elsaie ML, Shehata H, Farid T et al. Epidemiologic study of dermatological disorders among children in South Sinai, Egypt. *Int J Dermatol*. 2012;51(10):1180-5.
- Karthikeyan K, Thappa DM, Jeevankumar B .Pattern of pediatric dermatoses in a referral centre in South India. *Indian Pediatr*. 2004;41:373-7.
- Das KK. Pattern of dermatological diseases in Gauhati Medical College and Hospital Guwahati. *Indian J Dermatol Venereol Leprol*. 2003;69(1):16-8.