

# Burden of Skin Diseases at a Tertiary Care Hospital

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## Abstract

**Background:** To estimate frequencies of skin diseases in a tertiary care hospital catering to patients from Rawalpindi and the suburbs.

**Methods:** In this comparative cross sectional study a total of 41947 patients were evaluated and divided into four major groups, Allergic, Infectious, Inflammatory and Autoimmune and a fifth Miscellaneous group. From the medical records, history, physical examination and whenever necessary, laboratory investigations were analyzed.

**Results:** The most common infectious skin disorder was Scabies accounting for 18.9% of the total skin diseases. Most common allergic disorder was Dermatitis that accounted for 13.9% of the cases. Acne being the most common inflammatory condition constituted 11.96% of the cases. The most commonly affected age group was between 21-30 years with 19.5% of the cases. A seasonal pattern was seen and the maximum number of patient visits were seen in June (4272 cases) followed by July (4196 cases) and August (4146 cases).

**Conclusion:** The data suggests that the disease burden in Rawalpindi and the suburbs has been underestimated. These are more than benign diseases and special consideration needs to be given to extended public health initiatives to improve their control.

**Key words:** Disease burden, Scabies, Dermatitis, Acne

## Introduction

In developing countries 70% of the people suffer from skin diseases in some part of their life. The domain of Dermatology ranges from most complicated problems of malignancy to the finest cosmetic surgeries even in the absence of any underlying pathology. Many do not have access to basic skin services and even in developed countries 15% of the patients apply home remedies before proper medical services. Keeping in view the importance of health issues related to skin it is important to devise means and measures to estimate the burden of disease which affects not only the patient's life but also their families and society.<sup>1</sup>

Many of the skin infections are endemic in

developing countries. However the epidemiology of these diseases is inadequately understood in many areas, particularly in Pakistan. 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 health care providers to educate people about preventive aspects related to skin diseases so that the burden of disease can be minimized.<sup>2</sup>

## Patients and Methods

All patients seen at the Dermatology department of Benazir Bhutto Hospital from 1<sup>st</sup> January 2009 to 31<sup>st</sup> December 2009 were included in this study. A comparative cross sectional study was carried out; the data was entered in Microsoft Excel. A total of 41947 patients were evaluated and divided into four major groups, Allergic, Infectious, Inflammatory and Autoimmune skin disorders and a fifth miscellaneous group. The medical records, history, physical examination and whenever necessary, laboratory investigations were analyzed. All patients were evaluated by qualified dermatologists. Sex, age, clinical diagnoses and seasonal fluctuations of the most common skin problems were recorded. The management of the patients was also studied.

## Results

A total of forty one thousand nine hundred and forty seven patients (41947) from Rawalpindi and the suburbs attended the Dermatology Department in Benazir Bhutto Hospital from 1<sup>st</sup> January to 31<sup>st</sup> December 2009. Patients were divided into four groups, out of which more than one fourth of the patients (35.7%) presented with Infectious Diseases with cutaneous manifestations (Table 1). The most common infectious skin disorder was Scabies accounting for 18.9% of the total skin diseases (7914

patients out of 41947). The rest included Parasitic Diseases in 1.5%, (648 patients). Fungal Infections accounted for 7.5% (3163 patients), followed by Bacterial Infections and Viral Warts in 2.8% and 2.9% (1216 patients and 1241 patients) respectively. Viral exanthemas and Venereal diseases both accounted for less than 2% of the cases.

**Table 1: Type of Skin Disorders**

Groups	Male	Female
<b>Allergic skin disorders</b>		
Dermatitis	2012	3823
Urticaria	1134	1231
Drug eruptions	435	245
<b>Infectious skin disorders</b>		
Bacterial infections	674	542
Viral exanthemas	269	278
Fungal infections	1176	1987
Viral warts	674	567
Scabies	3563	4351
Other parasitic diseases	287	361
Venereal diseases	453	121
<b>Inflammatory and autoimmune skin disorders</b>		
Acne	1980	3039
Pityriasis rosea	528	623
Connective tissue diseases	43	34
Psoriasis	998	1091
Lichen Planus	767	654
Bullous diseases	565	433
<b>Miscellaneous group</b>		
Insect bites	341	432
Skin tumors	5	6
Undiagnosed	868	657
Pigmentary disorders	357	1776
Alopecia	546	176
Others	439	546
No skin findings	413	447
<b>Total</b>	<b>18527</b>	<b>23420</b>

The age group most commonly affected by the skin diseases was between 21-30 years (19.5%, 8214 patients) followed by the group of 31 - 40 years (19.02%, 7981 patients) years and then teenagers from 11 - 20 years (15.6%, 6562 patients) (Table 2). Patients from 41- 50 years were 14.12% and children under 10 years were 12.57%. Rest of the age groups represented less than 10% of the total cases while patients between ages of 81 - 90 years comprised of less than 1% of the total patients.

The maximum numbers of patient visits were

seen in June (4272 cases) followed by July (4196 cases) and August (4146 cases). December (2994 patients), January (2862 patients) and February (2823 patients) were months with fewer patients. The figure also shows that females were more predisposed to skin diseases as compared to males throughout the year irrespective of monthly distribution.

The second largest group of patients attending the hospital was with cutaneous manifestation of an allergic disorder (21.16%) [Table 1]. Most common were Dermatitis and Eczematous disorders that accounted for 13.9% (5835 patients), followed by Acute Urticaria or exacerbations of Chronic Urticaria (5.6%, 2365 patients) and Drug Eruptions (1.6%, 680 patients).

Exacerbations of mostly Chronic Autoimmune and Inflammatory skin disorders were the reason of the consultation in 25.57% of the patients (Table 1). Acne was the most common condition and constituted 11.96% cases (5019 patients). Psoriasis was found in 4.9% (2089 patients). Lichen Planus in 3.3% and bullous diseases in 2.3% of the cases. Pityriasis Rosea, an acute onset disease of unknown origin was diagnosed in 2.7% of the patients while Connective tissue disorders accounted for only 0.18% (77 patients)

Miscellaneous causes were found in 16.7% of outpatient visits at the Benazir Bhutto Hospital [Table 1]. Pigmentary disorders were seen in 5.08% (2133 patients). Insect bites were diagnosed in 1.84% of the patients (773 cases) and Alopecia in 1.72%. Skin tumors were seen in 0.026% of the patients. Other rare cases were found in 2.3%, while 2.05% had no skin findings. Undiagnosed cases comprised of 3.63% of patients. [Table 1]

**Table 2: Age of Patients**

Age(Years)	Patients	Percentage
0 -10	5274	12.57
11-20	6562	15.6
21-30	8214	19.5
31-40	7981	19.02
41-50	5925	14.12
51-60	3493	8.32
61-70	2632	6.27
71-80	1454	3.4
81-90	412	0.98
<b>Total</b>	<b>41947</b>	

## Discussion

It is seen that there is a lack of a full-functioning primary health care provision, especially in the urban areas and the number of dermatologists providing first contact care is limited. <sup>1</sup>The study was conducted to find out the prevalence of skin diseases in Rawalpindi and the suburbs and to describe those dermatological conditions that could easily be managed by primary care health physicians if they have received appropriate training.

The highest numbers of cases noted were of Scabies consisting of 18.9%. Children are a high risk group for scabies. <sup>2</sup> Audit report of 2006 carried out at Hamdard University Hospital, Karachi showed that scabies was the most common skin disease in children accounting for 21.9% of total cases. <sup>3</sup>

Eczema was seen in 21.16% of the total cases. It includes a variety of scaling, papular erythematous, vesicular, exudative, itching or burning cutaneous eruptions. These lesions may be acute, subacute or chronic with a number of associated secondary cutaneous changes. The study revealed a high frequency of Atopic Dermatitis which correlates with other studies that also report high frequency of this disease. <sup>4,5</sup> The most common Inflammatory Disease was Acne which accounted for 11.96% of the total patients. Psychological and emotional stress were the accompanied problems in this cohort. The psychiatric associations of acne can affect patients' lives in ways comparable to life-threatening or disabling diseases. Factors commonly seen in contributing acne are hereditary, food, stress, hormones and cosmetics. <sup>6-9</sup>

In conclusion skin diseases are often associated with less expensive diagnostic and therapeutic procedures and limited mortality, even then they are a leading cause of disability in the society. <sup>10</sup> They are more than benign disorders and special consideration needs to be given to extended public health initiatives to improve their control and quality of life as most of the infectious diseases are

preventable.

Healthy skin habits can ensure a protection against many skin diseases. Public resources should make people aware of skin diseases and its preventive measures. <sup>11,12</sup>

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