

# Dermatoses in Himalayas: Pattern of Skin Diseases in Himalayan Region of Nepal

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## Abstract

**Background:** Skin diseases are the major cause of out-patient visit in Nepal. Department of Health Services, Nepal ranks skin diseases as fourth common cause of out-patient visit throughout the country. The objective of the study was to determine the pattern of different skin diseases in Himalayan region of Nepal.

**Material and methods:** A cross sectional descriptive study design was conducted in a health camp setting in which 148 community people visited the camp with dermatological diseases. Information about socio-demographic and dermatological diseases were collected with a structured performa.

**Results:** The most common primary diagnosis was pigmentary anomaly (20.3%) followed by Eczemas (18.9%), Superficial mycoses (10.8%), and acne (10.1%). In all skin diseases male were more affected as compared to female.

**Conclusions:** The dermatoses of Himalayan region are pigmentary anomalies being most common, followed by eczemas, superficial mycoses, acne, photodermatoses, scabies, urticaria, benign tumours and pyodermas.

**Key words:** Skin diseases, Himalayan, Nepal

## Introduction

Skin diseases are the major cause of out-patient visit in Nepal. According to the annual report, Department of Health Services 2010/2011, skin diseases was 4<sup>th</sup> common cause of out-patient visit throughout the country.<sup>1</sup> There are only couple of studies which show the prevalence of the skin diseases in Nepal. All these studies vary in the methodology and outcome with resultant variation in prevalence of skin diseases. Most of the studies are hospital based and few of them are community based<sup>2-5</sup>. The study on pattern of skin diseases in Himalayan district of Nepal has not been documented. This study is an attempt

to define the pattern of skin diseases in one of the Himalayan district of Nepal, Humla district.

Humla district, one of Nepal's highest and most inaccessible district, is situated in far northwest of Nepal, bordering the Tibet, China. The common means of transportation are mules which bring required products from the Tibetan border to Simikot. The closest road-head to Humla is nine days walk to the south; and from Tibet six days walk away to the northeast. Humla has a population of about 50,858.<sup>6</sup> Its elevation ranges from 1,524 to 7,337 meters above the sea level. We chose Simikot, headquarters of Humla district arbitrarily to see the pattern of skin diseases in Himalayan region of Nepal. The objective of the study was to determine the pattern of different skin diseases in Himalayan region of Nepal. This type of study has never been conducted in Humla district before.

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## Material and methods

A cross sectional descriptive health camp based study design was adopted. The camp was organized on

the last week of October 2013 by Kathmandu based organization, Society of Dermatologists, Venereologists & Leprologists of Nepal (SODVELON) with a team comprising of two Dermatologists, and two medical officers at Simikot district hospital. A week ahead of the health camp, information about the skin health camp was aired from Simikot based FM radio station for seven days. In the information, all the person who think of having skin diseases were asked to visit the one-day skin health camp for free of cost examination, treatment and counseling. The camp was open from 8.30 am to 4.30 pm. Informed consent was taken before registering the patients. All the patients were examined once for the skin disease by registered Dermatologist. In addition to the primary complaint, the patient were examined in to for any other skin diseases they are living with. When a diagnosis was in doubt, opinion of a second Dermatologist was taken. The skin diseases were divided into a number of categories as defined by International foundation of Dermatology namely scabies, superficial mycoses, pyoderma, pediculosis, eczema, HIV related Dermatoses, pigmentary anomalies, and acne.<sup>7</sup> Urticarias, benign tumours, and appendageal tumours were also added in addition to these diseases. The demographic details and the diagnosis of the disease were recorded in preformed proforma.

Individuals who were identified as having individual skin disease were given appropriate treatment and advice free of cost. Only the cases requiring histopathological examination were referred to tertiary care centres (TU Teaching Hospital, Kathmandu or Nepalgunj Medical College, Nepalgunj).

## Results

A total of 148 patients were examined for skin diseases out of which 102 (68.9%) were males and 46 (31.1%) were females. The mean age was 25.3 years  $\pm$ 11.95 SD. The age range of those examined was 3 months to 60 years.

More than half (55.4%) of the total patients were from Brahmin/Chhetri/ Thakuri ethnic group. Most of the patients who came for health check up were office worker (34.5%), followed by students (33.1%), farmers and housewives (21.6%). The other group consisted preschool kids, Monks and business people (table 1).

Most of the patients were Hindus (77.7%), followed by Buddhists (20.9%) and Christian (1.2%).

Of these patients (62.0%) had SLC and above education while 12.0% were uneducated.

Almost all the patients were from Humla district (88.5%) whereas only 11.5% were from other districts.

The median time travelled to camp by walking was 3 hours (Q1= 30 minutes, Q3=24 hours). Forty-four (30.0%) of total camp visitors, walked more than 24 hours to reach the camp. One of the patients had traveled 96 hours to reach the camp.

A wide range of Dermatoses was identified. The dermatoses has been shown in table 2

The most common primary diagnosis was pigmentary anomaly (20.3%) which was much higher on male (76.7%) as compared to female (23.3) followed by Eczemas (18.9%), Superficial mycoses (10.8%), acne (10.1%), Photodermatoses (8.1%), Scabies (6.8%), Urticarias (6.1%), Benign tumours (4.7%), pyodermas(1.4%) and others( 12.8%).

## Discussion

In recent few years, the epidemiological studies on skin diseases in Nepal has increased. However, most of these studies are confined to Terai and Hilly regions of Nepal. In one of the studies conducted by Shrestha R et al<sup>8</sup> in rural village development community of hilly region of Nepal, the camp prevalence of skin diseases was 83% with eczema (36.4%), followed by infections (28.4 %), acne (22%), Pigment disorders (34%), and Urticaria (12.3%). In another similar study in Terai region by Walker SL et al <sup>3</sup>, the point prevalence of skin disease in camp was 62.2% with dermatophyte infections (11.4%) being the commonest followed by *P. versicolor* (8.9%), Acne( 7.7%), Melasma (6.8%), eczemas 5.6%) and *P. alba* (5.2%). In another study by Shrestha DP et al <sup>2</sup>, in which a house- to-house survey of skin disease was done, overall prevalence of Skin disease was shown to be 20.1%, with eczemas (12.2%) being the most common dermatoses followed by pigment disorder (4.1%), acne( 2.7%), urticaria(2.4%), and moles and lumps(1.6%). The same study had concluded that skin disease has large impact on quality of life of people of Nepal. The two studies from hilly region of Nepal shows eczema as one of the most common dermatoses in this region while infections were the most common predominating in Terai Region.

In our Study, the dermatoses of Himalayan region of Nepal were most commonly seen in males than females, with the disease seen across all age group, the most common being the adult group (21-30 years). The reason could be because the males might have more health seeking behavior compared to females in this region. Office worker were most common group

to visit the camp which could be because of awareness of disease in this group. Hindus were more in number to seek the health related service in our camp, and it could be because of awareness of health seeking behavior in this group. The educated group of people were most common to seek the service probably because of increased perceptibility of disease in this group.

In this study it was seen that the patient had traveled to camp by walking up to 96 hour to reach to our camp. This reflects the difficulty of receiving health service because of complex geography of this region. Moreover, it could justify introduction of newer technology such as telemedicine in this region especially in Dermatological services.

**Table 1:** Socio-demographic characteristics of the patients

	Male		Female		Total	
	n	%	n	%	n	%
<b>Age</b>						
0-10	7	63.6	4	36.4	11	7.4
11-20	33	75.0	11	25.0	44	29.7
21-30	43	66.2	22	33.8	65	43.9
31-40	7	63.6	4	36.4	11	7.4
41-50	6	60.0	4	40.0	10	6.8
51-60	6	85.7	1	14.3	7	7.4
<b>Ethnicity</b>						
Bramin/Chhetri/Thakuri	54	65.9	28	34.1	82	55.4
Janajati	39	70.9	16	29.1	55	37.2
Dalit	9	81.8	9	18.2	11	7.4
<b>Education</b>						
Illiterate	8	47.1	9	52.9	17	12.0
Primary level	11	57.9	8	42.1	19	13.4
Secondary level	13	72.2	5	27.8	18	12.6
SLC and above	66	75.0	22	25.0	88	62.0
<b>Occupation</b>						
Office worker	42	82.4	9	17.6	51	34.5
Students	33	67.3	16	32.7	49	33.1
Farmer/house wives	17	53.1	15	46.9	32	21.6
Others	10	62.5	6	37.5	16	10.8
<b>Total</b>	<b>102</b>	<b>68.9</b>	<b>46</b>	<b>31.1</b>	<b>148</b>	<b>100</b>

**Table 2:** Patterns of Dermatoses

Primary diagnosis	Male		Female		Total	
	n	%	n	%	n	%
Pigmentary anomalies	23	76.7	7	23.3	30	20.3
Eczema	18	64.3	10	35.7	28	18.9
Superficial mycoses	12	75.0	4	25.0	16	10.8
Acne	9	60.0	6	40.0	15	10.1
Photodermatoses	6	50.0	6	50.0	12	8.1
Scabies	5	50.0	5	50.0	10	6.8
Urticaria	7	77.8	2	22.2	9	6.1
Benign tumours	7	100.0	-	-	7	4.7
Pyoderma	2	100.0	-	-	2	1.4
Others	13	68.4	6	31.6	19	12.8
<b>Total</b>	<b>102</b>	<b>68.9</b>	<b>46</b>	<b>31.1</b>	<b>148</b>	<b>100</b>

Pigmentary anomaly was the most common dermatoses seen in our study in contrast to eczemas and fungal infections seen in hilly and Terai region respectively. The high intensity of Ultraviolet rays in this region could explain this pattern. However, there were no cases of cutaneous malignancies despite the assumed high Ultraviolet rays exposure, which could be explained by protective skin type in our population or else it could be question of next research.

## Conclusion

The dermatoses of Himalayan region are slightly different from the dermatoses of hilly and Terai region

of Nepal with pigmentary anomalies being most common, followed by eczemas, superficial mycoses, acne, photodermatoses, scabies, urticaria, benign tumours and pyodermas. These dermatoses pattern reflect the basic data of one of the Himalayan region of Nepal.

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