

Study of Patterns of Dermatoses in Pediatric OPD at Provincial Hospital of Nepal

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ABSTRACT

Introduction: Dermatoses are common among children and are one of the most frequently encountered conditions in pediatric OPD. Child differ from adult in presentation and management of dermatological problems. The pattern of disease is influenced by hygiene, nutritional status, overcrowding, climate and geography.

Objective: Objective of the present study was to find out the pattern of various dermatological conditions presenting in pediatric OPD of a district hospital in central Nepal.

Methods: A prospective observational study was done in pediatric OPD of Sindhuli district hospital from patients of first day of life to 16 years age group from February 2021 to October 2021. Sample size of the study was 268. After physical examination a provisional diagnosis was made and patient was consulted with dermatologist to confirm the diagnosis. The findings were recorded and data was analyzed.

Results: Majority of patients (100, 37.5%) belonged to the preschool age group of 1-5 years. The ratio of male to female was 1.29:1. Majority of dermatoses belonged to infectious group (137, 51%). Among infections fungal infections was most common (54, 39.5%) followed by bacterial infections (34, 24.8%).

Conclusion: This study showed the pattern of pediatric dermatoses in pediatric OPD of Sindhuli district hospital with high frequency of infectious dermatoses and preschool age group was most affected. This increase incidence of infectious dermatoses can be reduced by improving sanitation, hygiene and nutrition of children. There is also a strong need for strengthening community dermatology as recommended by WHO.

Keywords: Children; dermatoses; infections.

INTRODUCTION

Dermatoses are common among children and are one of the most frequently encountered conditions in pediatric OPD.

Among patients presenting in pediatric OPD around one third present with various skin conditions.¹ Various prevalence studies done in different part of the world suggest high prevalence of skin diseases in children (22-87%) and community base data suggest that the rate of visit in a primary healthcare center due to skin disease range from 6% to 23.7%.²

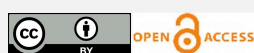
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The present study aimed to find out the pattern of various dermatological conditions presenting in pediatric OPD of a district hospital in central Nepal. World Health Organization has also advocated for the strengthening of community dermatology for developing countries.³ Hence this study might help policy makers to take appropriate action in preventing, accurately diagnosing and appropriately treating skin disorders in pediatric age group.

METHODS

A prospective observational study was carried out at Pediatric OPD of Sindhuli District Hospital. Ethical approval was obtained from Nepal Health Research Council (NHRC). Data was collected prospectively from patients of age group first day of life to 16 years presenting in Pediatric OPD with dermatological manifestations from February 2021 to October 2021. All pediatric patients who presented in pediatric OPD with dermatological manifestations and gave consent were included in the study. Those participants who fail to give consent were excluded from the study. Sample size for the study was 268. After taking and performing physical examination a provisional diagnosis was made and patient was consulted with dermatologist to confirm the diagnosis. A consecutive sampling method was used. Statistical analysis of data was done using Statistical Package for Social Sciences (SPSS)

version 23. Statistical methods used were mean, median, percentage and proportion.

RESULTS

Total 268 patients were included in the present study. Majority of patients (100, 37.3%) belonged to the preschool age group of 1-5 years followed by age group of 6-12 years (70, 26.1%). Mean age of patient was 5.18 years. Males (151, 56.3%) were more commonly affected than females (117, 43.7%) with male to female ratio of 1.29:1. (Table 1)

Table 1: Age and sex distribution of patients.

Age group (years)	Sex		Total N (%)
	Male	Female	
0-1 year	39 (59.09)	27 (40.90)	66 (24.63)
1-5 year	58 (58)	42 (42)	100 (37.31)
6-12 years	35 (50)	35 (50)	70 (26.11)
13-16 years	19 (59.37)	13 (40.62)	32 (11.95)
Total (N%)	151 (56.35)	117 (43.65)	268 (100.00)

Infectious dermatoses were found in 51.1% (n= 137) and noninfectious dermatoses was found in 48.9% (n= 131). (Figure 1)

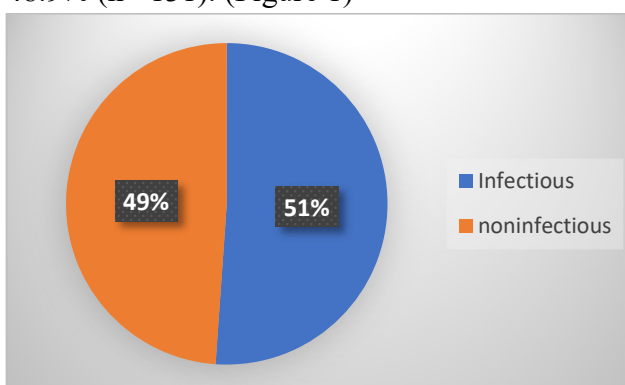


Figure 1: Pattern

In the infant age group seborrheic dermatitis was the commonest skin disorder which was followed by impetigo. Similarly, in the toddler and preschool, middle childhood and teenagers Acute urticaria, Dermatophytes and scabies respectively were the commonest skin disorders. (Table 2)

Table 2: Commonest skin disorders according to age group.

Ranking	0-1 (infants)	1-5 (toddlers & preschool)	6-12 (middle childhood)	13-16 (teenage)
First	Seborrheic dermatitis	Acute urticaria	Dermatophytes	Scabies
Second	Impetigo	Scabies	Scabies	Acne
Third	Atopic dermatitis	Dermatophytes	Acute urticaria	Acute urticaria

Fungal infection (54,39.5) was more common than bacterial infection (34, 24.8), viral infection (26,18.9), parasitic infection (23, 16.8). Among the fungal infection, dermatophytic infection was the commonest followed by pityriasis versicolor. Among the bacterial infections, impetigo contagiosa constituted the highest number of cases followed by cellulitis.

Among the non-infectious dermatoses, eczematous dermatoses were found to be the commonest. (Table 3, 4)

Table 3: Pattern of infection.

Infection	Occurrence
Bacterial	34(24.8%)
Furuncle	3
Impetigo	24
Cellulitis	5
Paronychia	2
Fungal	54 (39.5%)
Candidiasis	7
Dermatophyte	25
Pityriasis versicolor	20
Onychomycosis	2
Viral	26 (18.9%)

Varicella	13
Herpes zoster	1
Hand foot and mouth disease	4
Viral exanthem	4
Verrucae vulgaris	2
Molluscum contagiosum	2
Parasitic	23 (16.8%)
Scabies	23

Table 4: Pattern of noninfectious dermatoses.

Diseases	Occurrence
Eczema	56 (42.8%)
Seborrheic dermatitis	22
Atopic dermatitis	13
Pompholyx	1
Other	20
Urticaria	31 (23.7%)
Acute urticaria	27
Chronic urticaria	4
Papulosquamous disorders	3 (2.3%)
Psoriasis	2
Lichen planus	1
Sweat and sebaceous gland disorders	8 (6.1%)
Acne	3
Milia	3
Miliaria	2
Congenital	9 (6.8%)
Café-au-lait -spot	2
Epidermal nevus	2
Hemangioma	5
Insect bite hypersensitivity	9 (6.8%)
Others	15 (11.5%)
Scar	3
Pigmentation	3
Nail dystrophy	3
Corn	2
Erythema nodosum	1
Fibrotic granuloma	1
Lichen sclerosis	1
Purpura	1

DISCUSSION

Child differ from adult in presentation and management of dermatological problems. Skin of the children is more susceptible to infections and infestations due to immature immune system and more exposure to sub-clinical infectious carriers in school and within family itself.⁴

Male outnumbered female in this study with male is to female ratio of 1.29:1. This corresponds to study done by Bhattarai et al.⁴ Majority of children belong to preschool age group of 1-5 years. Similar findings were seen

in the study done by Garg et al.⁵ However there is variations in the predominant age group in various other studies.^{6,7} These variations might be due to the differences in the socioeconomic practices, geography, climate.

Infections and infestations were the most common group of disorders found in our study (51%). Similar finding were reported from various other studies from Nepal and India.^{4,5} This might be due to poor hygiene and sanitation in our part of world.

In the present study fungal infection (39.5%) was most common infectious dermatoses which was followed by bacterial (24.8%) and viral infection (18.9%). It corresponds to study done by Singh R et al and Sayal et al.^{8,9} However bacterial infections were the most common dermatoses as reported by Balai et al and Kartikayan et al.^{10,11} In studies done by foreign researcher's viral infections outnumbered fungal and bacterial infections.^{12,13}

Scabies was found in 23 cases which was 8.5 % of total dermatoses. The frequency of scabies was 14.21% of total dermatoses in a study by Bhattarai et al.⁴

Among noninfectious dermatoses eczema was the commonest (40, 30.6%). This finding is in consistent with the study of Medasani et al, in which it was present in 11.05% of total dermatoses.⁷ Of eczematous disorders, seborrheic dermatitis was the commonest similar to study by Singh et al.⁸

CONCLUSION

This study showed the pattern of pediatric dermatoses in pediatric OPD of Sindhuli District Hospital. There was high frequency of infectious dermatoses and preschool age group of 1 to 5 years was most affected. This increase incidence of infectious dermatoses can be reduced by improving sanitation, hygiene and nutrition of children. As dermatoses is a widespread problem in pediatric age group there is a strong need for strengthening community dermatology as recommended by WHO. This can be done by training of health workers in diagnosing and managing common skin disorders.

Conflict of interests: None.

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