Scenario of Pediatric Dermatoses in Rural Population of Central India

Sampada Thakare*, Adarshlata Singh, Amrita Madnani and Bhavna Lakhar

Department of Dermatology, Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha, India

Abstract: *Introduction*: Skin diseases in the pediatric population are common all over the world including rural and urban areas. The prevalence of pediatric dermatoses is higher in rural areas as compared to urban areas in relation to poor socio-economic status, poor personal hygiene, overcrowded, families lack of general awareness, lack of education, sanitation and specialized health facilities.

Aim: To study the proportion of different skin conditions presenting in pediatric age groups.

Material & Methods: This study was conducted in tertiary care center, Acharya Vinoba Bhave Rural Hospital. 710 patients were enrolled below the age group of 14 years and were divided in to 3 groups < 1 year, 1-4 years and 5-14 years.

Results: Out of 710 patients 46.3% infection and infestation, 18.6% dermatitis and eczema, 8.7% and 8.3% dermatoses of skin appendages and miscellaneous dermatoses found respectively. Nutritional dermatoses was found in 5.9%, nevus 3.8%, papulosquamousdermatoses 3.6%, pigmentary dermatoses 2.67% and both bullous and keratinization each of 0.98% patients.

Discussion: In our study most common dermatoses was infection and infestation which mainly occur due to low socioeconomic status, dietary habits, climatic exposure, lack of health awareness and poverty. Bacterial infections were most common in all the age group. The viral wart were common in 6-14 years of age group due to more exposure and enhanced outdoor activities.

Conclusion: Our study brings into light the presentation of rural pediatric dermatology patients were commonly of dermatoses like infections, infestations, dermatitis and nutritional disorders.

Keywords: Pediatric, dermatoses, rural, population, India.

INTRODUCTION

Skin diseases in the pediatric population are common all over the world including rural and urban areas. The prevalence of pediatric dermatoses is higher in rural areas as compared to urban areas in relation to poor socio-economic status, poor personal hygiene, overcrowded, families lack of general awareness, lack of education, sanitation and specialized health facilities [1]. The prevalence of pediatric dermatoses in school based surveys in India has ranged from 8.7% to 35% [2]. Skin diseases in the pediatric age group can be transitory or chronic and recurrent. The chronic dermatoses are associated with significant morbidity and psychological impact. Pediatric dermatoses requires a separate view from adult dermatoses as there are important differences in clinical presentation, treatment and prognosis [3]. Skin diseases in children are encountered frequently and their characterization is essential for the preparation of academic, research and health plans [4].

This study was undertaken to explore the pattern of skin diseases seen at a tertiary care rural setup in central India. The principal aim of this project was to study the proportion of different skin condition presenting in pediatric age groups.

MATERIAL AND METHOD

This study was conducted in the Dermatology , Venereology and Leprosy department of Jawaharlal Nehru Medical College, Acharya VinobaBhave Rural Hospital, Sawangi, Wardha India.

Seven hundred and ten patients younger than 14 years were enrolled. All patients were divided into three different age groups, <1 year old, >1year to 5 years old and6 years to 14 years.

The diagnosis of the dermatologic condition was made based on a detailed review of history, complete cutaneous examination and to confirm the diagnosis the related investigation was done whenever needed.

RESULTS

In Table **1** 710 pediatric patients were examined, of which 406(57.2) are males and 304(42.8) are females. 19.2% patient of < 1year, 35.2% patients of 1-5 year and 45.6% patient of 6-14 year age group.

*Address correspondence to this author at the Department of Dermatology, Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha, India;
Tel: 08983225009; E-mail: sampada.thakare@yahoo.com

Table 1: Age and Sex Distribution in the Study Group

Sex	Age Distribution(Years)			Total	%
	<1	1-5	6-14		
Female	50	108	146	304	42.8
Male	86	142	178	406	57.2
Total	136	250	324	710	
Percentage	19.2%	35.2%	45.6%		

Table 2: Distribution of Various Dermatoses in Different Age Group

Disease	< 1 year	1-5 year	6-14years	Total	Percentage
Infection and infestation	42	127	160	329	46.33
Dermatitis/eczema	34	62	36	132	18.59
Disorder of skin appendages	2	27	33	62	8.73
Miscellaneous disorder	5	20	34	59	8.30
Nutritional disorder	13	2	27	42	5.91
Naevus	22	3	2	27	3.80
Papulosquamous disorder	8	4	14	26	3.66
Pigmentary disorder	3	2	14	19	2.67
Bullous disorder	3	1	3	7	0.98
Keratinisation disorder	4	2	1	7	0.98
Total	136	250	324	710	

According to Table **2** infection and infestation being the most common dermatoses in pediatric age group i.e. 329 (46.33%). Dermatitis and eczema being second most common dermatoses i.e. 132 (18.59%).

According to Table **3** 109 (33.1%) patient of bacterial infection, 100(30.4%) parasitic infection, 80(24.3%) viral infection and 40(12.2%) were of fungal infection. Maximum number of patient i.e. 160 (48.6%)

Table 3: Distribution of Various Infections in Different Age Group

Infections	< 1 year	1-5 year	6-14 year	Total	Percentage
Bacterial	17	29	63	109	33.1
Parasitic	2	55	43	100	30.4
Viral	18	32	30	80	24.3
Fungal	5	11	24	40	12.2
Total	42	127	160	329	
Percentage	12.8	38.6	48.6		

Table 4: Distribution of Various Dermatitis in Different Age Group

Dermatitis	< 1 year	1-5 year	6-14 year	Total	Percentage (out of 132)
Atopic dermatitis	4	29	5	38	28.7
Seborrhoeicdematitis	8	10	13	31	23.8
Diaper dermatitis	21	2	-	23	16.6
Other eczemas	0	13	7	20	15.8
Contact dermatitis	1	5	10	16	12.1
Pompholyx	-	3	1	4	3.0
Total	34	62	36	132	

were between 6-14 year age group. Minimum number of patients 42 (12.8%) were < 1year of age group.

According to Table **4** atopic dermatitis was the most common dermatoses being 28.7%. Diaper dermatitis being common in less than 1 year age group.

Table 5: Other Dermatoses

Disease	No. of cases
Miliria	35(4.92%)
PLE *	36(5.07%)
Phrynoderma	25(3.52%)
Vitiligo	10(1.4%)
Urticarial	7(0.98%)

*Polymorphic light eruptions.

DISCUSSION

The most common dermatoses in our study were infections and infestations, observed in 46.33% of the study population. Among infections, bacterial infections were the most common in our study followed by viral infections and fungal infections**.** The incidence of bacterial infections in our study was 109 (33.1%) similar to other studies. Saurabh *et al.* found bacterial infection being 31.9% [1].

Lack of health awareness, poor personal hygiene, poverty and overcrowding, especially in the rural population were important factors that contributed to the higher prevalence of bacterial infection. Also the incidence of scabies to be in our study, almost similar to observations in other studies. Most of the scabies cases were found in the children (6-14yrs) group [5]. In our study, viral rash was the most common of all the viral infections, followed by viral warts and molluscumcontagiosum. We observed that viral warts were more common in the adolescent (6-14 yrs) group, similar to observations in previous studies [6, 7]. Adolescents are vulnerable for viral infections due to increased exposure and enhanced outdoor activity.

The most common dermatitis in age group 1-5yrs was atopic dermatitis (28.7%) and eczema (15.8%). Seborrhoeic and contact dermatitis being prevalent in 6-14years. Diaper dermatitis being most common in less than 1 year age group (16.6%).

In the age group of 1-5 years and 6-14 years miliria and milia were most common. We also found the prevalence of bacterial infection, miliaria and papularurticaria shooting up suddenly when the patient enters the toddler age group. This may be attributed to the exposure to external environmental factors away from the cozy protection of home as well as increased physical contact with neighbours as the baby learns to walk [8].

Maximum cases of PLE were found in both 1-5 and 6-14 years age group. Second most common being urticarial in 6-14years age group. There were also few cases of lividoreticularis, pityriasis lichenoides et varioliformis acuta (PLEVA), piabaldism, tuberous sclerosis, hand foot mouth disease in the age group of 6-14 years.

Skin diseases are a major health problem in the pediatric age group and are associated with significant morbidity and psychological impact, this is more common with chronic dermatoses. Paediatric dermatoses requires a separate view from adult dermatoses as there are important differences in clinical presentation, treatment and prognosis. Dermatoses in children are more influenced by socio-economic status, climatic exposure, dietary habits and external environment as compared to adults.It has been shown in other parts of the world that there is generally poor health seeking behaviour in individuals with skin disease. The WHO (World Health Organization) in a workshop in 2004 has advocated for strengthening of community dermatology for developing countries while others have called for training of health workers in the diagnosis and management of skin diseases [9]. These efforts may help address the problem of misdiagnosis and management of these disorders.

CONCLUSION

Our study brings into light the presentation of rural pediatric dermatology patients were commonly of dermatoses like infections and infestations, dermatitis and nutritional disorders. The incidence of pediatricdermatoses can be brought down by increasing awareness among the population regarding etiology and spread of pediatric diseases and also by improving sanitation, nutrition and personal hygiene of children

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