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Original Research Article

Evaluation of Dermatologic Diseases in Pediatric Patients

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ABSTRACT

Introduction: The pattern of skin diseases varies widely among different geographical locations and over time. Various climatic factors that may determine the incidence of skin diseases are cold, heat, light, sunshine and humidity. Thus, the present study was undertaken to evaluate the pattern and incidence of various skin disorders in pediatric patients and to study pattern according to rural or urban residential status.

Materials and Methods: The present study was conducted among 200 children upto 5 years of age (infants, toddlers and preschoolers) reporting with complaints of skin problems to the dermatology outpatient. The diagnoses were categorized into various groups that include various infections and infestations (bacterial, viral, parasitic and fungal), eczematous disorders, bite reactions, drug reactions and various other dermatosis. The results were tabulated and analyzed by Chi-square test with p value <0.05 as significant value.

Results: 20.5% patients had dermatosis due to bacterial infection, 7% due to viral, 7% due to fungal infections, 9% from parasitic infections. 37% suffered due to eczematous disorder. No statistical significant difference (p value >0.05) was seen in distribution of dermatological disorders in urban/rural population.

Conclusion: India is a developing country with vast climatic diversity and thus the pattern of skin diseases is different across the states, rural and urban areas, and hilly areas. In view of this, it is important to conduct surveys to rule out the prevalence and pattern of pediatric dermatologic diseases across different areas according to difference in climatic conditions. The present study reported that infections were most prevalent among pediatric patients reporting with the complaint of skin diseases followed by eczematous disorders.

Keywords: Pediatric Patients; Eczematous Disorders; Skin Infections and Infestations.

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INTRODUCTION

Skin diseases are a major health problem in the pediatric age group and constitute 30% of all outpatient visits to a pediatrician.[1] The pattern of skin diseases varies widely among different geographical locations and over time. Various climatic factors that may determine the incidence of skin diseases are cold, heat, light, sunshine and humidity.[2] Also, different degrees of exposure to external factors as well as different levels of functional development of skin may give rise to differential prevalence of dermatoses among infants, toddlers and children. Majority of dermatoses belong to infections, followed by eczematous and hypersensitive disorders.[3] Thus, the present study was undertaken to evaluate the pattern and incidence of various skin disorders in pediatric patients and to study pattern according to rural or urban residential status.

MATERIAL AND METHODS

The present prospective study was conducted among 200 children upto 5 years of age (infants, toddlers and preschoolers) reporting with complaints of skin problems to the dermatology outpatient. The diagnoses were categorized into various groups that includes various infections and infestations (bacterial, viral, parasitic and fungal), eczematous disorders, bite reactions, drug reactions, naevus, urticaria, papulosquamous diseases, pigmentary diseases (table 1). Data so obtained was tabulated and analyzed by Chi-square test with p value <0.05 as significant value.

RESULTS

Table 1 shows the various causes of dermatosis among rural and urban population, the results of our study shows that there were total 20.5% (29 rural and 12 urban) population suffering from dermatosis due to bacterial infection, 7% (8 rural and 6 urban) due to viral, 7% (10 rural and 4 urban) from fungal infections, 9% (14 rural and 4 urban) from parasitic infections. 37% (45 rural and 29 urban) suffered due to eczematous disorder, 2.5% (2 rural and 3 urban) from allergic dermatosis, 4.5% (7 rural and 1 urban) from bite reactions, 1.5% (1 rural and 2 urban) from drug reactions, 3%

(all 6 urban) had nevus, 1% (all 2 urban) from papulosquamous, 3% (3 rural and 3 urban) from urticaria, 1.5% (2 rural and 1 urban) from pigmentary disease, 1% (all 2 rural) had nutritional dermatosis, 1% (all 2 urban) had congenital disease and 0.5% (only 1 urban) suffered from vesiculobullous disease. Chart 1 & Graph 1 shows prevalance of Dermatosis in Rural and urban area. No statistical significant difference (p value >0.05) was seen in distribution of dermatological disorders in urban/rural population.

Table 1: Prevalance of Dermatosis in Rural and urban area

Dermatosis		Total n=200	Percentage (%)	Rural	Urban
Bacterial		41	20.5%	29	12
	Impetigo	13 (out of 41)	31.7%	8	5
	Secondary Pyoderma	8 (out of 41)	19.5%	5	3
Viral		14	7%	8	6
Parasitic		18	9%	14	4
	Pediculosiscapitis	5 (out of 18)	27.77%	5	0
Fungal		14	7%	10	4
	Scabies	7 (out of 14)	50%	6	1
Eczematous disorders		74	37%	45	29
	Atopic dermatitis	39 (out of 74)	52.7%	25	14
	Diaper dermatitis	21 (out of 74)	28.3%	5	16
Allergic dermatoses		5	2.5%	2	3
Bite reactions		9	4.5%	7	2
Drug reactions		3	1.5%	1	2
Naevus		6	3%	0	6
Papulosquamous diseases		2	1%	2	0
Urticaria		6	3%	3	3
Pigmentary diseases		3	1.5%	2	1
Nutritional dermatoses		2	1%	2	0
Congenital diseases		2	1%	0	2
Vesiculobullousdiseaeses		1	0.5%	0	1

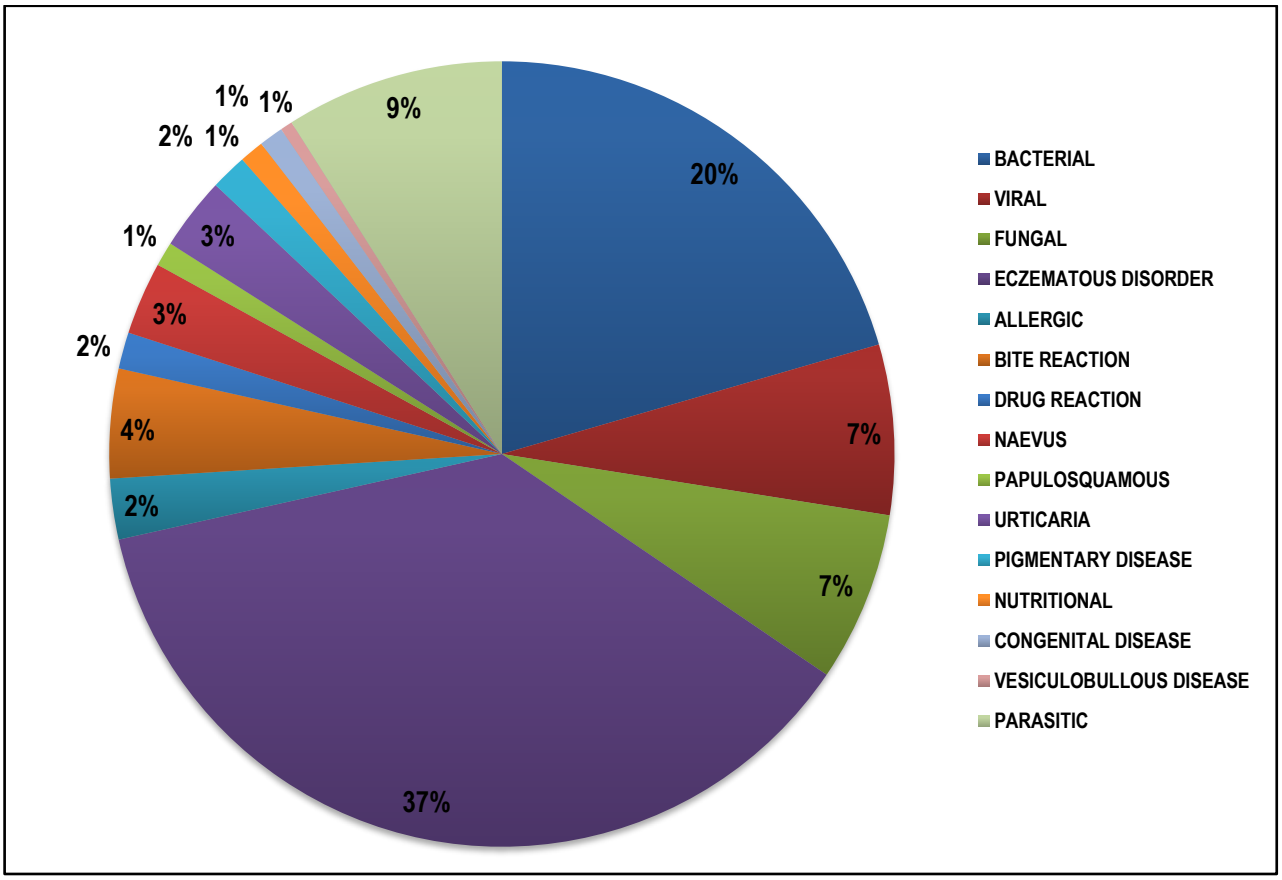
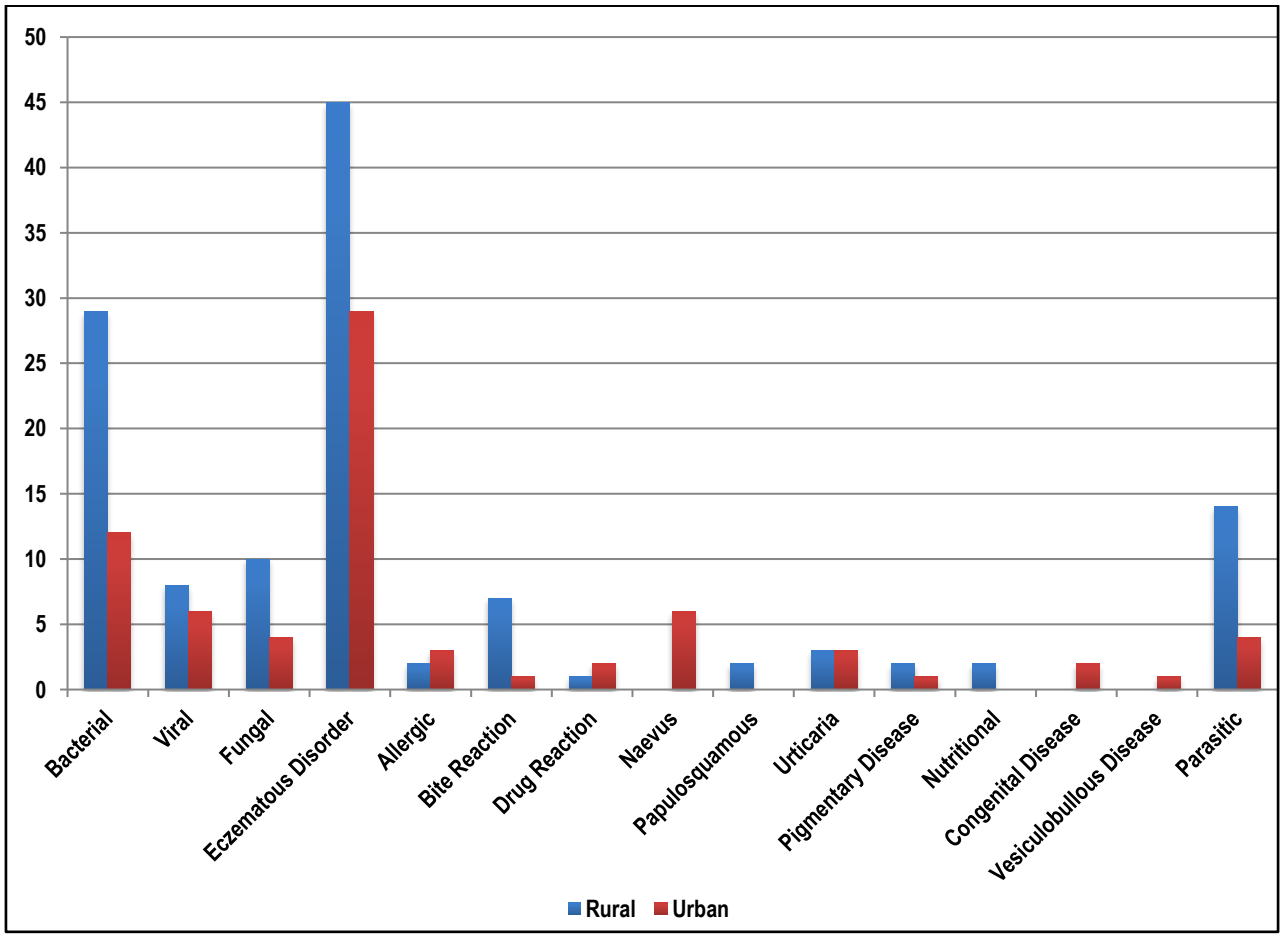


Chart 1: Percentage of Prevalence of Dermatosis among the study group



Graph 1: Prevalence of Dermatosis among Rural and urban population

DISCUSSION

The prevalence of skin diseases in developing countries is very high, and that infestations and skin infections are highly endemic in poor rural communities.[4] In view of this, the present study was undertaken and revealed that infections were most prevalent among pediatric patients reporting with the complaint of skin diseases followed by eczematous disorders. Similarly, Karthikeyan K et al[5] also found that infections and infestations were the most common dermatoses followed by dermatitis and eczema. In contrast to present study, Sharma RC et al[6] reported that the incidence of parasitic infestations was the highest with scabies as the major infestation, followed by pyodermas and fungal infections. Sardana K et al[7] conducted a retrospective study to evaluate the epidemiologic features of pediatric dermatoses in India and reported that most of the disease was seen in the 1- to 5-year age group with the most common skin diseases being infections and infestations consisting of bacterial infections and scabies), followed by eczemas, infantile seborrheic dermatitis, scabies, and pityriasis alba. Figueroa JI et al[4] conducted a study to evaluate the prevalence of skin disease among school children in rural Ethiopia and revealed that infestations were the most prevalent skin pathology, 81.2%, followed by fungal infections, 13.4%. Nanda A et al[8] conducted a survey pediatric patients at dermatology clinic in Kuwait and reported that infants constituted the largest group within the patient population with atopic dermatitis as the most prevalent dermatosis, followed by viral warts, alopecia areata, pityriasis alba, psoriasis and diaper dermatitis. Hayden GF[9] reported that children with primary or secondary skin complaints, the most frequent diagnoses included skin infections (36%), diaper dermatitis (16%), and atopic dermatitis (9%).

Various Indian studies reported variation in prevalence pattern which can be attributed to variation in climatic pattern. Sharma NL et al[10] conducted a dermatological survey among school children of high altitude tribal area of Himachal Pradesh and reported pediculosis capitis as the commonest disease followed by pityriasis simplex, warts, scabies, pyoderma and papular urticaria. Banerjee S et al[3] reported impetigo, miliaria, scabies, furunculosis, seborrheic dermatitis and papular urticaria as most skin common diseases with scabies and seborrheic dermatitis more prevalent during winter while impetigo, furunculosis and miliaria more during summer and rainy season, papular urticaria more frequent in the rainy season and also revealed that seborrheic dermatitis predominantly affected the infants while impetigo, furunculosis, miliaria and popular urticaria were more commoner in older age groups. Bhatia V[11] carried a study at Wardha district in Maharastra, Central India and reported that infective dermatoses contributed 63.5% of all dermatoses, while noninfectious and nutritional deficiency dermatoses were responsibile for 21.2% and 15.2%, respectively. Regarding bite reactions, present study reported 4.5% prevalence which can be explained by the fact that most of these children presenting with this condition were from rural or semi urban areas and wear scanty clothing due to climatic conditions and thus being exposed to insect bites. Similarly Ghosh SK et al[12] observed a frequency of 4% and Karthikeyan K et al[5] reported prevalence of insect bite reaction to 5.27%.

CONCLUSION

India is a developing country with vast climatic diversity and thus the pattern of skin diseases is different across the states, rural and urban areas, and hilly areas. In view of this, it is important to conduct surveys to rule out the prevalence and pattern of pediatric dermatologic diseases across different areas according to difference in climatic conditions. The present study reported that infections were most prevalent among pediatric patients reporting with the complaint of skin diseases followed by eczematous disorders.

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