

An epidemiological analysis of dermatosis in a school going children in an urban area of Chennai, Tamilnadu – A cross sectional study.

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ABSTRACT

INTRODUCTION:

Skin problems are the most widespread health problems among school going children being very effective on the psychological, emotional and somatic stress for the family and also for the child. We at the medical college aim to learn the epidemiological and the clinical pattern of skin manifestations in school aged children.

MATERIALS AND METHODS:

A Cross-sectional study on 80 Children whose Parents were willing to give consent was done between the time period December 2019 to February 2020. The collected data was analysed using SPSS 21 version.

RESULTS:

The overall mean age in the study was 8.26 years with a standard deviation of 2.64 years. In our study we had 21.25% of pityriasis alba, 20% of impetigo, 6.25% of scabies, 7.5% of seborrheic dermatitis, 15% of pediculosis, 2.5% of tinea corporis, 3.7% of Tinea versicolor, 5% of Molluscum contagiosum, and 1% of Insect bite allergy, Candidial intertrigo, Chicken pox and warts.

CONCLUSION:

The dermatological manifestations are common most often go neglected as they are asymptomatic a careful evaluation of children needs to be done as part of routine school checkups to identify them early.

KEYWORDS: Dermatitis, School going children, Pityriasis alba

INTRODUCTION:

The biggest organ of the human body is the skin and a very important indicator of the general condition and of the health of children. Skin problems are the most widespread health problems among school going children. Skin problems can have a very effective impact on the psychological, emotional and somatic stress for the child and the family. Skin diseases in children are encountered frequently. skin infections are common among school going children. The prevalence of skin diseases among children in India stages from 8.7 % to 35 %¹. Factors like socioeconomic status, environmental conditions, dietary habits, climate, hygiene, cultural elements, genetic factors and education popularity of mother and father affect the presence of skin sicknesses in children. The pattern of skin disease is a consequence of poverty, malnutrition, overcrowding, poor hygiene, illiteracy, and social backwardness in many parts of India². Various dermatoses in children includes physiological and pathological dermatoses³. Due to various climatic, cultural and socio-economic factors the pattern of skin diseases in paediatric age group varies from country to country and from one state to another⁴. Status of health, hygiene and personal cleanliness of a society can be judged from the prevalence of certain skin diseases in the children of the community. Among the study population about 80 % of children are enrolled and about 65 % are regularly attending school on an average for 200 days in a year⁵. Skin illnesses are the maximum frequent diseases of children in many growing countries⁶. Among school going children many research has been completed, however only a few studies had been conducted to find out the correlation between socioeconomic status and dermatological manifestation among school going children in south Tamil Nadu.

We at the medical college decided to conduct the study of dermatological manifestations in school aged children, with the aim to learn the epidemiological and the clinical pattern of skin manifestations in a preschool going children.

MEAN AGE OF THE PATIENTS	Mean age	Std. deviation
Pityriasis Alba	8 Years	Years
Impetigo	6.43 Years	Years
Scabies	5.8 Years	0.83 Years
Contact Dermatitis	9.67 Years	2.84 Years
Seborrheic Dermatitis	8.8 Years	3.3 Years
Pediculosis	10.42 Years	1.62 Years
Miliaria	6 Years	0
Warts	5 Years	0
Xerosis	5 Years	0
PMLE	6 Years	0
Atopic Dermatitis	5 Years	0
Tinea Versicolor	8 Years	1 Years
Insect Bite Allergy	10 Years	0
Candidial Intertrigo	7 Years	0
Tinea Corporis	9.5 Years	1.5 Years
Papular Urticaria	12 Years	0
Chicken Pox	12 Years	0
Urticaria	12 Years	0
Vitiligo	7 Years	0
Molluscum Contagiosum	10 Years	2.3 Years

MATERIALS AND METHODS:

A Cross-sectional study on 80 Children in between 5 - 12 years of age group whose Parents were willing to give consent was done between the time period December 2019 to February 2020. Approval obtained for the study protocol by our institutional research & human ethical committee, the patients satisfying the inclusion criteria were studied.

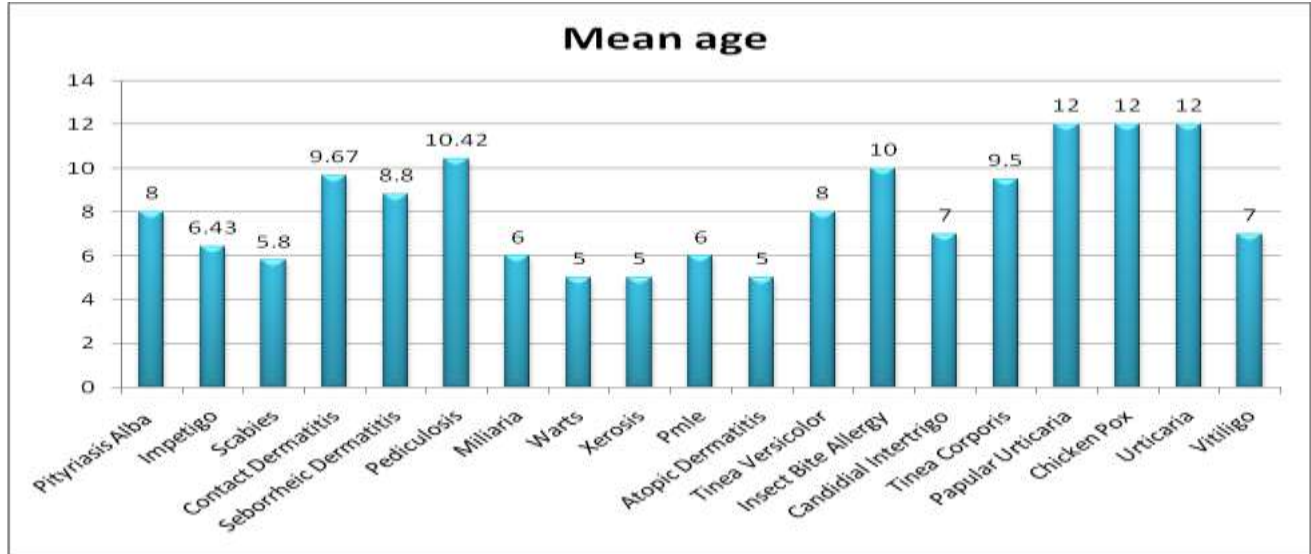
Children in between 5 - 12 years of age group coming to dermatology and paediatrics OP were selected for this study. Written informed consent was taken from parents and detail about the procedure were explained to all the selected patients. The collected data was analysed using SPSS 21 version. The data obtained was analysed in terms of the objective of the study by using descriptive and inferential statistics.

RESULTS:

DISTRIBUTION OF MEAN AGE OF THE CASES IN THE STUDY

TABLE NUMBER 1 :- DISTRIBUTION OF MEAN AGE OF THE CASES IN THE STUDY

The overall mean age in the study was 8.26 years with a standard deviation of 2.64 years. Non-infectious causes like Urticaria, papular Urticaria seborrhorheic dermatitis 46.25% of the children were less than 8 years, the most common age involved was 12 years with 18 cases 22.50%. In the present study males outnumbered the females, we had 53 male children accounting for 66.25% of the total study population and 27 female children accounting for 33.75% of the total study population. In the present study we found that 35% of the cases belonged to the upper middle class with 28 cases. In the present study we found that 45 cases belonged accounting for 56.25 % of the total study population lived in rural areas to the upper middle class with 28 cases.



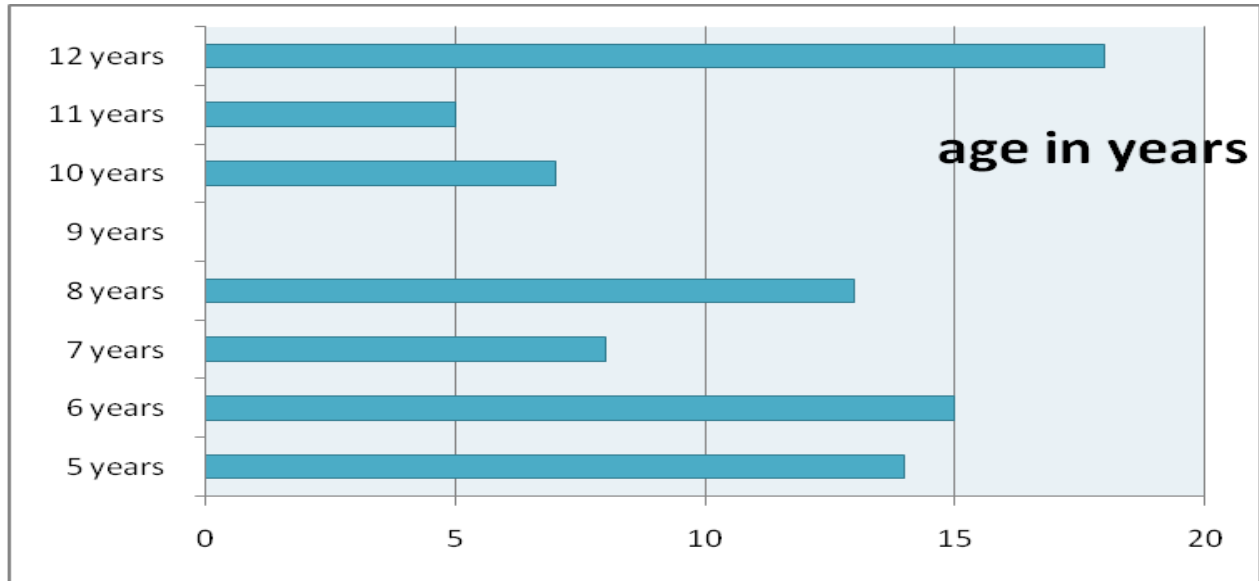
GRAPH NUMBER 1 :- DISTRIBUTION OF CASES MEAN AGE OF THE IN THE STUDY

We had 17 Pityriasis alba, all except one were incidentally detected when evaluated for other conditions. Males dominated with 15 of the 17 cases being males and only 2 females. The age of the children ranged from 5 to 13 years with the mean being 8 years SD+2.57 years sharing of towel was seen in 4 cases and sharing of clothing among family members was seen in 1 case, sharing of toilet soap was seen in 5 cases, all bathed daily and all had hypopigmented macules. The most common site was the neck seen in 7 cases followed by the trunk in 5 cases, the whole-body hands and legs were involved in the rest cases. We had 16 impetigo, all had pain, 6 had oozing from the lesion and 5 had itching except one were incidentally detected when evaluated for other conditions. Males dominated with 11 of the 16 cases being males and only 6 females. The age of the children ranged from 5 to 10 years with the mean being 6.43 years SD+1.78 years. Similar episode in the past was seen in 5 children, sharing of towel was seen in 14cases and sharing of clothing among family members was seen in 11case, all used soap for taking bath, sharing of toilet soap was seen in 16 cases among which 2 bathed daily, bathing on alternate days was found in 5 case bathing, once in three days in 6 cases and bathing weekly once in 3 cases. All had crusted lesions, the most common site was the hands. The lesions were present on the hands in 12 cases, face in 5 cases and back in one case.

DISTRIBUTION OF AGE GROUP OF THE CASES IN THE STUDY

Age in years	NUMBER OF CASES	PERCENTAGE
5 years	14 children	17.50 %
6 years	15 children	18.75 %
7 years	8 children	10.00 %
8 years	13 children	16.25 %
9 years	0	0.00 %
10 years	7 children	8.75 %
11 years	5 children	6.25 %
12 years	18 children	22.50 %
total	80 children	100.00 %

TABLE NUMBER 2:- DISTRIBUTION OF AGE GROUP OF THE CASES IN THE STUDY



GRAPH NUMBER 2:- DISTRIBUTION OF AGE GROUP OF THE CASES IN THE STUDY

We had 5 cases of scabies, all had itchy as the predominant symptom. 1 were female and 45 were males, in the female the hands were involved and in the males the legs were the site of lesion. The mean age was 5.2 years. One male child presented with secondary infection with discharge and crusting. Sharing of items was a common feature and 4 of the 5 belonged to rural areas.

Molluscum Contagiosum was seen in 4 children all were males with the hand being the site of involvement it was detected as an incidental finding in all cases, though the lesion was present for a long time as it was a painless lesion the parents did not feel the need to consult for the same. Seborrhoea dermatitis was seen in 6 children all presented with itching and scaling, 4 exclusively involved the scalp, one had a corona seborrheic and we had one case of seborrheic psoriasis. Contact Dermatitis was seen in 4 children, 3 females and one male child, all 4 presented within 24 hours of contact, 2 within 6 hours with itching and redness, one after 12 hours with itching redness and pain and one after a 24 hours with itching redness and pain.

Pediculosis was seen predominantly in the female child of the 12 cases found in the study were itching was the commonest presentation. Miliaria rubra was seen in one child which was seen as a red itching rash involving the whole body predominantly the trunk and the back .

DISTRIBUTION OF GENDER OF THE CASES IN THE STUDY

GENDER OF THE PATIENTS	Females	Males	total
Pityriasis Alba	2	15	17
Impetigo	6	10	16
Scabies	1	4	5
Seborrheic Dermatitis	2	4	6
Contact Dermatitis	3	1	4
Pediculosis	11	1	12
Miliaria	0	1	1
Warts	0	1	1

Xerosis	0	1	1
PMLE	0	1	1
Atopic Dermatitis	1	0	1
Tinea Versicolor	1	2	3
Insect Bite Allergy	0	1	1
Candidial Intertrigo	0	1	1
Tinea Corporis	0	2	2
Papular Urticaria	0	1	1
Chicken Pox	0	1	1
Urticaria	0	1	1
Vitiligo	0	1	1
Molluscum Contagiosum	0	4	4
Total	27	53	80
PERCENTAGE	33.75 %	66.25 %	100.00 %

TABLE NUMBER 3:- DISTRIBUTION OF GENDER OF THE CASES IN THE STUDY

One male had a viral wart on the left foot, one male child presented with Xerosis, PMLE, Papular Urticaria, Insect Bite Allergy and Candidial Intertrigo, Chicken Pox, Urticaria in all these conditions pruritis was the commonest complaint. Vitiligo was seen in one male child that presented with skin hypopigmentation. Tinea Corporis was seen in 2 males, Tinea Versicolor was seen in one female and two males, Tinea Corporis in 2 females and three males all of 1 which presented with an itchy lesion.

Presenting Symptom Of The Cases In The Study	Asymptomatic	Itching	Discoloration	Dryness Of Skin
Number Of Cases	16	9	44	2
Percentage	20.00 %	11.25 %	55.00 %	2.50 %
Presenting Symptom Of The Cases In The Study	Scaling	Oozing	Pain Yes	Loss Of Sensation
Number Of Cases	0	6	40	0
Percentage	0.00 %	7.50 %	50.00 %	0.00 %

TABLE NUMBER4:- DISTRIBUTION OF PRESENTING SYMPTOM OF THE CASES IN THE STUDY

DISCUSSION:

Dermatological manifestations for the duration of the youth period include both infectious and non-infectious illnesses. There is version within the sample of dermatoses, with eczemas being the maximum commonplace skin disease in evolved international locations and infections and infestations within the growing international locations. Another essential demographic factor is that maximum of the skin sicknesses occurs commonly in the preschool age institution between the age organization of 1–5 years age. Popularity of fitness, hygiene and personal cleanliness of a society can be judged from the superiority of certain skin illnesses inside the youngsters of the community. ^(8, 9)

Our findings are similar to most Indian studies. Here below we compare our findings with other studies.

In our study we had 17cases of pityriasis alba accounting for 21.25%, 16cases of impetigo accounting for 20%, 5cases of scabies accounting for 6.25%, 6cases of seborrheic dermatitis accounting for 7.5%, 12cases of pediculosis accounting for 15%. 2cases of tinea corporis accounting for 2.5%, 3cases of tinea versicolor 3.7%, 4cases of molluscum contagiosum accounting for 5%, and one case each of insect bite allergy, candidial intertrigo, chicken pox, warts accounting for 1.25%

Venkata Subba Reddy et al¹⁰ done a study in the year 2015 stated that the most common dermatoses was infections and infestations. Manisha Balai⁴. 86 percent had infections and infestations, Sharma et al⁵ also stated that the most common dermatoses was infections and infestations

This is similar to the present study we also had infections and infestations as the commonest dermatological manifestation (68 cases 85%), 6.25% were viral infections.

Venkata Subba Reddy et al¹⁰, Manisha Balai⁴, Sharma et al⁵, showed a female preponderance, this is in contrast to the present study we had 66.25% males.

Sharma et al done a study in the year 2012 at Punjab stated that pityriasis alba constituted 4.9 percent. pediculosis 0.5 percent, scabies 11 percent all cases.

	Infections	Pyodermas	fungal infections	viral infections	parasitic infestations	insect bite reaction	psoriasis	miliaria	impetigo
Sayal SK et al ⁷	31%						1.40%		
Sharma et al ⁶		34.05%	8.42%	3.85%	53.66%				
Karthikeyan K et al ⁹		47.13%				5.27%		4.10%	
Patel JK	38.43%	8.90%							11.13%
Shrestha R et al ³			7.30%	14.12%				2.75%	
Manisha Balai et al ⁴	13.72%		6.52%	3.40%					

TABLE 5: COMPARISON OF OUR FINDINGS WITH OTHER STUDIES.

CONCLUSION:

In the present study we came to the following conclusion that dermatological manifestations are common most often go neglected as they are asymptomatic a careful evaluation of children needs to be done as part of routine school checkups to identify them early .

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