



PREVALENCE OF SKIN DISORDERS AMONG PRIMARY SCHOOL CHILDREN IN URBAN RAIPUR CHHATTISGARH

KEYWORDS

SKIN DISORDERS, PRIMARY SCHOOL CHILDREN

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ABSTRACT

Skin disorders are very common among primary school children in RAIPUR. Older age group is affected more than the younger one. Transmissible disorder constituted \approx 44% of total skin disease burden in our subjects. Educating children to improve their hygienic status may bring down the prevalence of transmissible diseases among them and this can be easily carried out at school level. Nutritional deficiencies were also noted in a significant number of students and hence cannot be overlooked. Educating children for eating healthy food and distribution of other nutritional supplements with iron-folic acid among school children at schools could contribute to improve health status of children.

Introduction

Children are more prone to develop skin disease. In children skin diseases are an important health problem. Contact between classmates is an important cause of skin infection and infestation among school children. The prevalence and pattern of skin disease has seen to vary with socioeconomic and cultural factors which in turn related to hygiene and treatment seeking behaviour. (2) Most of the skin problems though chronic are nonlethal, hence often neglected by families that is further worsened by poor health care access. School survey is a useful yardstick as it is easy to conduct, less time consuming and large number of children of particular age group can be screened for presence of disease at a time (3). It is also a useful tool to detect prevalence of various skin disease and status of health and hygiene of society (4). Assessment of the burden and pattern of skin diseases at school may improve care of children through school health programme (2). Health education on nutrition and personal hygiene can help to improve health status of school children.

Material and Method

This study was a cross sectional study conducted from Sept-2012 to Nov. 2012 in service area of Urban Health and Training centre, Raipur Institute of Medical sciences, Raipur. 3 Government and 2 public schools were randomly selected in service area of our UHTC. Children of selected schools were clinically examined by a team of doctors and interns at school premises. Efforts were made to ensure privacy and proper lighting at the time of clinical examination. Skin, scalp and nails of the children were examined by a dermatologist and interns. Prescription and instructions slips were given to the teachers. For other diagnosis referral slips were made. 1047 students present at the time of survey out of 1209 enrolled in class I to Class V were examined. Data obtained was tabulated and analysed statistically using chi-square test.

Results

1047 students out of 1209 were examined. Of these 460 (44%) were girls and 587 (56%) were boys. 712 (68%) were of 4 – 7 years age, and 335 (32%) of 8 – 12 years.

Table 1: Age and sex wise distribution of study subjects

	age	no.
boys	4 – 7 years	395
	8 – 12 years	192
	Total	587

girls	4 – 7 years	317
	8 – 12 years	143
	Total	460

Total 455 (43.46%) student were having one or more skin problems. 304 (29.04%) students had only one skin disease whereas 151 (14.42%) had 2 or more skin diseases at the time of examination.

Table 2: Distribution of study subjects as per number of skin problems they suffered

Students with no skin problems	592
students with 1 skin problems	304
students with 2 skin problems	135
students with >2 skin problems	16

Table 3: Distribution of various skin disorders among primary school students

Diagnosis	No.	%
Pediculus capitis	97	15.54
Pityriasis alba	132	21.15
Scabies	37	5.93
Bacterial Infection	108	17.31
Fungal infection	35	5.61
Phrynoderma	123	19.71
Naevi	22	3.53
Milliariasis	18	2.88
Warts	5	0.80
Angular cheilitis /stomatitis	32	5.13
Burns	3	0.48
Contact dermatitis	3	0.48
Acne	2	0.32
Others	7	1.12
total	624	100

A total of 624 diagnoses were made for the 455 affected children..

Pediculosis capitis, pityriasis alba, and phrynoderma were the commonest problems found in study subjects These three problems accounted for around 56% of the total burden of skin diseases. Other common skin disorder noted were bacterial infections, scabies, fungal infections and angular cheilitis / stomatitis which contributed for 17.31%, 5.93%, 5.61% and 5.13% of total diagnosis respectively.

Infections (bacterial and fungal) accounted for 22.91% and infestations (pediculosis and scabies) for 21.47% of total skin disorders found among the study subjects. Only 2 cases of acne vulgaris were found. Both were girls from older age group.

Table 4 : Prevalence of various skin disorders among boys and girls

diagnosis	Boys		Girls		P-value
	no.	%	no.	%	
pediculus capitis	5	0.85	92	20	<0.001
pityriasis alba	92	15.67	40	8.70	<0.001
phrynoderma	84	14.31	41	8.91	<0.001
scabies	24	4.09	13	2.83	0.0681
bact. Infection	45	7.67	63	13.70	0.0753
fungal infection	21	3.58	14	3.043	0.2328
naevi	13	2.21	9	1.96	0.3913
milliarisis	2	0.34	16	3.48	<0.001
warts	4	0.68	1	0.22	0.1792
angular cheilitis /stomatitis	13	2.21	19	4.13	0.2851
burns	1	0.17	2	0.43	0.5634
acne	0	0.00	2	0.43	0.1571
contact dermatitis	2	0.34	1	0.22	0.5634
others	5	0.85	2	0.43	0.256
total	311	52.98	315	68.4783	

Difference in the overall prevalence of skin disorders between boys and girls was not found significant ($p = 0.2506$ i. e. > 0.05) in this study. Pediculosis was found significantly more in girls as compare to boys. We also found milliarisis significantly more prevalent among girls in our study. Whereas P. alba and phrynoderma affected more boys than girls and the difference was found to get increased with age.

Table 5 : Prevalence of various skin disorders according to age of study subjects

diagnosis	4 -7 years		8 - 12 years		P-value
	no.	%	no.	%	
pediculus capitis	39	5.48	58	17.31	0.0482
pityriasis alba	29	4.07	103	30.75	<0.001
phrynoderma	53	7.44	72	21.49	0.0797
scabies	16	2.25	21	6.27	0.4069
bact. Infection	66	9.27	42	12.54	0.0177
fungal infection	20	2.81	15	4.478	0.394
naevi	9	1.26	13	3.88	0.3913
milliarisis	3	0.42	15	4.48	0.0049
warts	0	0.00	5	1.49	0.0252
angular cheilitis /stomatitis	19	2.67	13	3.88	0.2851
burns	1	0.14	2	0.60	0.5634
acne	0	0.00	2	0.60	0.1571
contact dermatitis	1	0.14	2	0.60	0.5634
Others	4	0.56	3	0.90	0.4135
Total	260	36.52	366	109.254	

In our study the prevalence of skin disorders is significantly higher in children of 8 – 12 years when compared to 4 – 7 year age children. ($\chi^2 = 476.59$, $p = <0.01$). Pediculosis, p.alba, bacterial infections, milliarisis, and warts were found significantly more among older children (8 – 12 years) in our study.

Discussion

Prevalence of skin disorders among students was 43.44% in our study. While Kuruvilla⁽⁵⁾, Vallia⁽⁶⁾, Yaseen⁽⁷⁾, and Suman Saurabh⁽²⁾, found it 76.65%, 53.6%, 69.38%, and 69.0%, respectively. This might be because students in our study belong to urban area whereas these study subjects came from rural background. In Rita Vora's⁽⁸⁾ study semi urban population were examined and

they found overall prevalence as 15.14%. In our study we found prevalence of transmissible skin disorders as 44.38% of where as Suman Saurabh⁽²⁾ found it 71.2%, Vallia⁽⁶⁾ 43%, K.S. Negi⁽¹⁾ 50.9%, Kuruvilla⁽⁵⁾ 42.68%, and Rita Vora's⁽⁸⁾ 18.14 %. The Difference in Hygienic status, socioeconomic status and background (rural or urban) of the subjects of these studies could be the possible cause of variation of prevalence of transmissible disorder found by these researchers. Pediculosis, Phrynoderma and P-alba were the most common disorders found among students of our study, where these three problems accounted for 56% of total diagnosis made. Suman Saurabh⁽²⁾ also found pediculosis a major skin problem in their study subjects, in whom pediculosis, pyderma and scabies constituted 77% of total diagnosis. P-alba was found among the 3 most common skin problems by Anand et al⁽⁹⁾, Rita Vora et al⁽⁸⁾ and Valia et al⁽⁶⁾. In our study we found significantly higher prevalence of skin diseases in 8-12 year age group as compare to 4-7 year age group students. Yaseen and Hassan⁽⁷⁾ and Suman Saurabh⁽²⁾ also found similar findings in their study where prevalence in 9-14 years age group and 9-10 years age groups students respectively were found higher in their studies.

Conclusion

We can hereby summarize that skin disorders are very common among primary school children in our area. Older age group is affected more than the younger one. Transmissible disorder constituted $\approx 44\%$ of total skin disease burden in our subjects. Educating children to improve their hygienic status may bring down the prevalence of transmissible diseases among them and this can be easily carried out at school level. Nutritional deficiencies were also noted in a significant number of students and hence cannot be overlooked. Educating children for eating healthy food and distribution of other nutritional supplements with iron-folic acid among school children at schools could contribute to improve health status of children.

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