

Research Article

Study of Various Skin Disorders in Children in Health Training Centres of Etawah District, Uttar Pradesh: A Cross-Sectional Study

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DOI: <https://doi.org/10.24321/2455.9199.202204>

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How to cite this article:

Soni K, Kumar V, Prajapati AK, Bharti RK, Jain PK, Singh NP. Study of Various Skin Disorders in Children in Health Training Centres of Etawah District, Uttar Pradesh: A Cross-Sectional Study. Int J HealthCare Edu & Med Inform. 2022; 9(1&2): 20-23.

Date of Submission: 2021-09-06

Date of Acceptance: 2022-06-19

A B S T R A C T

Background: In India, we have varied social customs, religions, climate and socio-economic conditions and therefore the pattern of skin diseases varies from region to region. In children, dermatoses are an important health problem. Skin disease affects more than 300 million people per year worldwide, resulting in considerable morbidity, especially in resource-limited countries. In view of paucity of data from Etawah region in Uttar Pradesh, the present study was conducted to evaluate the pattern of skin diseases in health training centres of U.P.U.M.S medical college in Saifai region, Etawah district of Uttar Pradesh in India.

Aims and Objectives: To find out pattern of various skin disorders in children.

Material and Methods: A prospective cross sectional study was carried out over a period of 4 months from 1 October 2019 to 31 January 2020 in OPD at Urban health training centre (UHTC) after ethical approval from the institute on every Tuesday and Thursday in Uttar Pradesh in India.

Results: Pediculosis capitis (22.6%) was the most common dermatosis, followed by pyoderma (15.4%), pityriasis Alba (10.4%) and eczema (8.1%). Nutritional deficiency dermatoses (17.5%) were also common in this region [common manifestations included sparse hair (6.2%) and pigmented skin (7%).

Conclusion: Pattern of skin diseases mostly depend not only on environmental factors but also on occupation, socio-economic status, literacy, and age of the patients. Health education of the parents and the schoolchildren about good nutrition, hygiene practices, and proper hydration of skin can be promoting in order to reduce the burden of skin disorders.

Keywords: Skin disorders, Children, Health-training Centres

Introduction

Distribution of skin diseases differs from country to country and even city to city. Some factors like genetic, environment, race, occupation, nutrition and habits can influence the pattern of skin diseases.¹⁻⁴ Pattern of skin diseases mostly depend not only on environmental factors but also on occupation, socio-economic status, literacy, and age of the patients. Skin or dermatological disorders are more common and it is the fourth non-fatal health burden, globally.⁵ It constitutes two percentages of total outpatient department (OPD) consultations worldwide.⁶ Various studies conducted in developing countries have concluded that skin diseases are very common among children and adolescents, infections and infestations being high on the list.⁷ India being the second most populous country in the world with about 35% of its population in the paediatric age group (<14 years of age).⁸ Skin diseases in the paediatric age group can be transitory, chronic or recurrent. Primary or secondary dermatological complaints constitute about 30% of all outpatient visit to a children clinic and dermatological outpatient department visits.⁹⁻¹¹ The most important factors accounting for distribution of skin diseases in the developing country like India includes malnutrition socioeconomic status, poor standards of hygiene and overcrowding. The knowledge about the prevailing morbidity pattern of skin diseases among paediatric population is more important in order to take essential steps in reducing them and health educational programs and precautionary measures like personal hygiene, proper nutrition can be planned which in turn improve the health status of paediatric population. Present study was conducted to assess the pattern of skin diseases in paediatric age group patients attending a tertiary care hospital.

Materials and Methods

This study was conducted amongst paediatric population age <14 years, attending at the Urban health training centres of Etawah district, U.P.U.M.S, Saifai, for a period of four months (from October 1, 2019 to January 31, 2020). We recorded 1754 new cases of both male and female children of age groups between 0-14 years within this specified period. We tried our best to enrol all new patients. The study was based mainly on clinical basis of first visit. It was a prospective cross-sectional study carried out over a period of 4 months from 1 Dec 2019 to 31 March 2020 after ethical approval from the institute every Tuesday and Thursday in OPD at urban health training centre (UHTC) of U.P.U.M.S medical college in Saifai region, Etawah district of Uttar Pradesh in India. Socio demographic characteristics and associated risk factors were collected by trained health professionals by using structured questionnaire. The diagnosis was ascertained

based on history and clinical examination. For this study, all particulars of the patients, history in details was taken, and thorough clinical examination was done. All information was put on proforma for clinical diagnosis and analysis. Data on demographic details, clinical findings, family history and past history was noted in predesigned performa. The individual participant's parents were explained about the study and they were also assured that, their identity and their child identity would be kept strictly confidential and they have the option to refuse participation in the study. Written informed consent was obtained from the study participant's parents prior to the interview. Every effort was made, to be sure that all information collected from the participants, remain confidential. The study was conducted using a proforma with the clinical history and diagnosis of the participants. Data was entered in Microsoft excel and data analysis was done using statistical package for social sciences (SPSS) version 25. Inclusion criteria: Paediatric age group (<14 years). Exclusion criteria: Pregnant mother, case of chronic skin disease and whose parents are not willing to participate. Exclusion of observer bias: Throughout the study period, all patients were seen by two post graduate residents having adequate experience in identifying these lesions correctly. This eliminated the observer bias in study. Statistical analysis: All the statistical analyses were performed using SPSS version 25 and the results were reported in percentage.

Results

These children (n = 1754) had 2455 episodes of dermatoses. An episode indicates the number of skin diseases present at a time in a child. Out of total 2455 episodes in children, infectious dermatoses were observed in 1250 (50.9%) while non-infective and nutritional deficiency dermatoses were seen in 775 (31.6%) and 430 (17.5%), respectively (Table 1). Among the infectious dermatoses, Pediculosis capitis was found in 555 (22.6%) children being three time more in the girls. Other common diagnoses were pyoderma in 383 (15.6%) children, followed by scabies in 125 (5.1%) and dermatophytosis in 106 (4.3%) subjects (Table 2).

Table 1. Sex wise Distribution of Infective, non-infective and Deficiency Dermatoses in Children aged 0-14 years

Type of skin Diseases	Male		Female		Total	(%)
	No.	(%)	No.	(%)		
Infective	632	47.9	618	54.4	1250	50.9
Non-infective	451	34.2	324	28.5	775	31.6
Nutritional Deficiency	236	17.9	194	17.1	430	17.5
Total	1319	100	1136	100	2455	100

Table 2. Infective Dermatoses in Children aged 0-14 years

Type of dermatoses	Male	(%)	Female	(%)	Total	(%)
Dermatophytosis	78	5.9	28	2.5	106	4.3
Leprosy	12	0.9	5	0.5	17	0.7
Pediculosis capitis	148	11.2	407	35.8	555	22.6
Pyoderma	241	18.3	142	12.5	383	15.6
Scabies	101	7.7	24	2.1	125	5.1
Viral	52	3.9	12	1.1	64	2.6
Total	632	47.9	618	54.4	1250	50.9

Table 3. Non-infective Dermatoses in Children aged 0-14 years

Non-infective Dermatoses	Male	(%)	Female	(%)	Total	(%)
Acne Vulgaris	29	2.2	20	1.8	49	2.0
Eczema	108	8.2	90	7.9	198	8.1
Pityriasis alba	143	10.8	113	9.9	256	10.4
Pityriasis capitis	55	4.2	56	4.9	111	4.5
Vitiligo	44	3.3	26	2.3	70	2.9
Others*	72	5.5	19	1.7	91	3.7
Total	451	34.2	324	28.5	775	31.6

*Includes pigmentary patches, insect bite, drug eruptions, miliaria etc.

Table 4. Nutritional Deficiency Dermatoses in Children 0-14 years

Nutritional Deficiency Dermatoses	Male	(%)	Female	(%)	Total	(%)
Angular stomatitis	27	2.0	23	2.0	50	2.0
Cheilosis	20	1.5	14	1.2	34	1.4
Gingivitis	14	1.1	9	0.9	23	0.9
Sparse hair	71	5.4	82	7.2	153	6.2
Hypopigmented skin	49	3.7	31	2.7	80	3.3
Hyperpigmented skin	55	4.2	35	3.1	90	3.7
Total	236	17.9	194	17.1	430	17.5

Among non-infective dermatoses Pityriasis Alba in 256 (10.4%) children and eczema in 198 (8.1%) were the major presentations (Table 3). Nutritional deficiency dermatoses primarily manifested as sparse hair and pigmentation disorders (Table 4).

Discussion

The pattern of skin diseases in paediatric age group vary from one country to another and within the same country from one state to another due to various climatic, cultural and socio-economic factors. The infants are mostly confined to their household, while preschool children aged one to five years are exposed to their neighbourhood. Thus, childhood age may be considered as a surrogate marker for environmental risks. Among paediatric dermatoses, infectious dermatoses contributed 50.9% of all cases under

study. Infective disorders are reported to be high in most of studies ranging from 63.5% to 85.2%. Similar results were also reported earlier. This can be attributed to poor hygienic and sanitary conditions, lack of awareness and poor health services. Pediculosis capitis and pyoderma infections are major problems occurring in 22.6% and 15.6%, respectively. Among these dermatoses, girls are more affected (35.8%) as compared to boys (11.2%). Similar sex differences were reported for Pediculosis capitis. Pediculosis capitis was observed to be the commonest problem by other authors from different regions. The reason for this is that most of the girls keep long hair and do not wash them so frequently. Scabies was observed in only 5.1% cases.

Bhatia³ also reported low scabies prevalence whereas this was the commonest disease in under six year children in

a slum of Mumbai. Pityriasis alba and eczema were the major presentations among non-infective dermatoses whereas sparse hair and pigmented skin were found in 6.2% and 7% among nutritional deficiency skin diseases. Similar findings have been reported earlier⁸. Ghosh et al conducted a study among 500 children (<12 years) attending dermatology OPD were recruited to study the pattern of common dermatoses.⁹ In their study, pyoderma was the most common skin disease (35.6%), followed by scabies (22.4%), eczema (17.6%), molluscum contagiosum (4.6%), papular urticaria (4.0%), vitiligo (3.4%), miliaria (2.8%) and nevi (1.6%). A study from south India by Karthikeyan et al among the children of less than 14 years of age reported that infections and infestations (54.5%) were the most common paediatric dermatoses.¹⁰ Bisht et al reported that infections and infestations were commonest disorders contributing to 36.46% of all cases. Major infections/infestations were viral (9.76%) followed by scabies (9.29%), fungal (9.01%) and bacterial (8.46%).¹¹ Other important groups of dermatological disorders were dermatitis in 29.63% cases out of which seborrheic dermatitis (10.12%), atopic dermatitis (5.96%), pityriasis alba (5.96%), non-specific eczema (3.46%) and contact dermatitis (2.77%). Other skin diseases included papular urticaria/insect bite allergy (8.46%), naevi/developmental lesions (4.02%), pigmentary disorders (3.32%), sweat gland disorders (2.08%) and miscellaneous group (6.38%) respectively.

Conclusion

Considering the high prevalence of skin diseases in Etawah district of Uttar Pradesh, coupled with limited availability of trained dermatologist, Skin disorders in the paediatric age group are common and showing increasing trend compared to the previous studies. Hence there is a need for diagnostic and therapeutic training for dermatologists, general practitioners and paediatricians in this group of disorders. Also, health education of the parents and the school children about good nutrition, hygiene practices, and proper hydration of skin can be promoting in order to reduce the burden of skin disorders.

Conflict of Interest: None

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