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PATTERN OF PEDIATRIC DERMATOSES IN A TERTIARY CARE CENTRE OF PATNA , BIHAR

Dermatology

Ramawatar Singh Assistant Professor , Department Of Skin And V.d , Nalanda Medical College & Hospital , Patna .

Pooja Nupur* Senior Resident , Department Of Skin And V.d , Nalanda Medical College & Hospital , Patna*Corresponding Author .

ABSTRACT

Background : The evaluation for skin disorder forms an important component of primary health care practice for all including children. The prevalence of certain skin diseases in children can reflect status of health, hygiene and personal cleanliness of a community. Aims & **Objective :** This study was planned to evaluate the magnitude of skin diseases, pattern of various dermatoses, factors contributing to these dermatoses and concurrent systemic disease among children up to 5 years of age. **Material and Methods :** Consecutive 100 children, aged up to 5 years, attending Dermatology OPD of Nalanda Medical College and Hospital were the subjects of this study. A detailed general, systemic and cutaneous examination followed by relevant investigations were carried out. The findings were recorded in a proforma for analysis and interpretation of data. Results : One hundred and thirty (130) diagnoses were made in 100 children. Etiological analysis revealed that majority (53,40.76%) of dermatoses belonged to infection and infestation group followed by eczematous (39,30%) and hypersensitivity (13,10%) . Of the infection and infestation group, bacterial infection was (23, 17.69%) and viral infection (14, 10.76%) respectively . **Conclusion :** This study provides a preliminary baseline data for future clinical research. It might also help to assess the changing trends of pediatric dermatoses.

KEYWORDS

Pediatric Dermatosis , Seasonal Influences, Changing Trends

INTRODUCTION

The pattern of skin disease is a consequence of poverty, malnutrition, overcrowding, poor hygiene, illiteracy and social backwardness in many parts of India.1 The evaluation for skin disorders is an important component of primary health care practice for all, including children.2 Status of health, hygiene and personal cleanliness of a society can be judged from the prevalence of certain skin diseases in children of the community.[3]

Wide range of primary skin disorders are seen during childhood and skin is often a marker of underlying systemic diseases and hereditary syndromes.4 The pattern of skin diseases varies from country to country with pyoderma and malnutrition being more prevalent in developing countries, while eczemas are more common in developed countries. This can be attributed to differing climatic, cultural and socioeconomic factors.5 Dermatological problems account for about 30% of primary and secondary reasons for pediatric clinic visits and 30% of all visits to dermatologists involve patients of pediatric age group.6 The incidence of skin diseases in children has been reported to be 9% - 37% in various studies.[2,5,7-10]

This study was carried out to share our experience about various dermatoses prevalent among children up to 5 years of age attending Dermatology OPD , Nalanda Medical College & Hospital , Patna , Bihar.

MATERIAL & METHODS

Consecutive 100 children, aged up to 5 years, attending the Dermatology out patient department (OPD) of Nalanda Medical College & Hospital, Patna , were the subjects of this study. A detailed general, systemic and cutaneous examination were done. Relevant investigations were carried out whenever deemed necessary. The findings were recorded in a proforma for analysis and interpretation of data.

RESULTS

Out of total 4800 patients examined, 100 (2.08%) patients were children up to 5 years of age. Males slightly outnumbered females; the male: female ratio was [1.13:1.]

Some of the patients had more than one dermatosis. A total of 130 dermatoses were recorded in 100 patients. The majority (53,40.70%) of dermatoses belonged to infection and infestation group followed by eczematous (39, 30%) and hypersensitivity (13, 10%) . The pattern of other dermatoses is depicted in Table 1.

Table 1 : Pattern of dermatosis (n=130)

Conditions	No. of Males	No. of Females	Total no. & %
Infection&Infestation	30	23	53 (40.7%)
Eczematous condition	24	15	39 (30%)
Hypersensitivity	06	07	13 (10%)
Nevi	05	05	10 (7.6%)
Bullous	01	0	01 (0.77%)
Keratinization	03	09	12 (9.2%)
Pigmentation	0	02	02 (1.5%)

Amongst the infective dermatoses, bacterial infection (23,17.69%) was the most common entity followed by fungal (16, 12.30%) and viral infection (14, 10.76%). Out of bacterial infection, impetigo (11, 47.82%) was the commonest entity followed by secondary pyoderma (4,17.39%). The pattern of bacterial infection is shown in Table 2.

Table 2 : Pattern of bacterial infections (n=23)

Entity	Male	Female	Total (%)
Impetigo	5	6	11 (47.82%)
Sec. pyoderma	2	2	04 (17.39%)
Folliculitis	1	1	02 (8.69%)
Furuncle	2	1	03 (13.04%)
Scrofuloderma	1	2	03 (13.04%)

Pattern of eczematous disorders as depicted in Table 3 revealed atopic dermatitis to be the commonest (12, 50%) followed by seborrhoeic dermatitis (7,29.16%) and pityriasis alba (01, 4.16%). Among the hypersensitivity disorders, urticaria formed the largest (05, 38.46%) group followed by papular urticaria (04, 30.77%) as shown in Table 4.

Table 3 : Pattern of eczematous dermatitis (n=24)

Entity	Male	Female	Total (%)
Atopic dermatitis	6	6	12 (50%)
Seb. Dermatitis	4	3	07 (29.16%)
P. alba	0	1	01 (4.16%)
Pompholyx	1	1	02 (8.33%)
Diaper dermatitis	1	0	01 (4.16%)
Intertrigo	0	1	01 (4.16%)

Table 4 : Pattern of hypersensitivity disorders (n=13)

Entity	Male	Female	Total (%)
Urticaria	2	3	05 (38.46%)
Angioedema	0	1	01 (7.69%)
Aquagenic urticaria	1	1	02 (15.38%)
Papular urticaria	2	2	04 (30.77%)
Insect bite	1	0	01 (7.69%)

Keratoderma (10, 83.33%) and ichthyosis (02,16.67%) were the two most common keratinization disorders. Pigmentary disorders were recorded in 2 patients, of which post inflammatory hypopigmentation was (01, 50%) and vitiligo (01, 50%). No case of lichen planus was recorded. No vascular lesion was discovered. Out of the 10 patients of nevi, naevus depigmentosus and epidermal nevi were seen in 5 each.
A pattern of seasonal variation was observed in 6 common dermatoses. Patients with impetigo and dermatophytic infections were recorded mainly in rainy and summer season, while scabies was mostly seen in winter and rainy season. Atopic dermatitis and seborrhoeic dermatitis were documented more in winter season and popular urticaria presented predominantly in rainy season.

DISCUSSION

The pattern of skin diseases in pediatric 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.5 The infants are mostly confined to their household, while preschool children aged 1 to 5 years are exposed to their neighborhood. Thus, childhood age may be considered as a surrogate marker for environmental risks.11

Pattern of pediatric dermatoses has varied in different studies. In this study, majority (53, 40.7%) of dermatoses belonged to infection and infestation group followed by eczemas (39, 30%) and hypersensitivity (13, 10%) . A similar pattern of dermatoses has also been reported in several other studies.2,5,8,9,12-16 However, in few studies,17-20 eczema group has been the predominant dermatoses.

Of the infective dermatoses, bacterial infection (23,17.69%) was the most common followed by fungal (16,12.30%) and viral infection (14,10.76%). Similar pattern has been observed in some other studies as well.2,9,16,21 Sayal et al.,5 reported fungal infection to be more common, while viral infection out numbered bacterial and fungal infection in a study by Wenk and Itin 18 and Gul et al.20 The variation among infective dermatoses can possibly be attributed to the region of study, prevalent environmental factors, type of population studied and hygiene and nutritional status. Impetigo was the commonest (11,47.82%) bacterial infection followed by secondary pyoderma (04,17.39%). Most studies 2,5,10-12,17 reported impetigo as the commonest bacterial infection.

Of the eczema group, atopic dermatitis was the commonest (12, 50%) followed by seborrhoeic dermatitis (07, 29.16%) and pityriasis alba (01,4.16%), a finding similar to other studies.16-17 However, Hayden 2 documented diaper dermatitis (16%) to be more common followed by atopic dermatitis (9%) and seborrhoeic dermatitis (6%), while Sardana et al.,16 found infantile seborrhoeic dermatitis (10.49%) to be more common compared to pityriasis alba (5.85%) and atopic dermatitis (5.27%). The incidence of eczemas primarily depend upon genetic constitution, individual predisposition and environmental threats/allergens. Urticaria (05, 38.46%) was the commonest hypersensitivity disorder followed by papular urticaria (04, 30.77%). Sayal et al., 5 and Sardana et al.,16 noticed a frequent occurrence of popular urticaria compared to urticaria, while in some studies,9,17 urticaria has been reported to be more common than papular urticaria.

Of the nutritional disorders, acrodermatitis enteropathica was the only entity recorded in 7(5.38%) patients. A lower incidence (3.6%) of acrodermatitis enteropathica has also been reported in a study from Karachi by Javed et al.18 Interestingly, there was only 1 case of psoriasis and no case of lichen planus found in our study. There was no significant association of various dermatoses with systemic diseases in our study except for a single case of pyoderma in whom hypothyroidism was associated.

The prevalence of certain dermatoses may be influenced by seasonal and climatic changes. This was quite evident in our study in which atopic dermatitis and seborrhoeic dermatitis were noted predominantly in winters while papular urticaria was seen more frequently in rainy season. Dhar et al.,22 in a large series of 672 children of atopic dermatitis documented disease aggravation during winters in 67.14% and 58% of infantile and childhood atopic dermatitis cases, respectively. Banerjee et al.,23 studied seasonal variations in pediatric dermatoses and found scabies and seborrhoeic dermatitis to be more prevalent during winter, while impetigo, furunculosis and miliaria during summer and rainy season. Papular urticaria was more frequent in the rainy season. Almost a similar observation was documented in our study also.

CONCLUSION

This study provides a preliminary baseline data for future clinical research. It might also help to assess the changing trends of pediatric dermatoses.

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