# PATTERNS OF PAEDIATRIC DERMATOSES AT A TERTIARY CARE CENTRE IN UTTARAKHAND

*Samarjit Roy[1], Rashmi Jindal[2], Ena Jain[3]*

*[1]Associate Professor, Department of Dermatology, Himalayan Institute of Medical Sciences, Swami Ram Nagar.*
*[2]Assistant Professor, Department of Dermatology, Himalayan Institute of Medical Sciences, Swami Ram Nagar.*
*[3]Post Graduate Student, Department of Dermatology, Himalayan Institute of Medical Sciences, Swami Ram Nagar.*

**ABSTRACT**

**BACKGROUND**
Incidence of pediatric dermatoses is on the rise with one third of all out patient dermatology attendees being children. However there is lack of studies on pediatric dermatoses patterns in different regions of the country.

**AIMS**
This study was aimed to know the patterns of dermatoses in children in sub Himalayan region of Uttarakhand.

**METHODS & MATERIALS**
This was a retrospective study where data of all the children presenting to dermatology outpatient department between September 2014 to August 2015 was analyzed. A total of 1012 pediatric patients were included in the study and diagnosis was made on clinical grounds and relevant investigations.

**RESULTS**
Infections and infestations (50.9%) were the commonest dermatoses in our study. This was followed by other non-infective dermatoses like dermatitis (16.9%), pigmentary disorders (9.7%), papulo-squamous disorders (4.0%), hair disorders (4.0%), acne (3.5%), genetic disorders (0.19%), Hemangiomas (0.19%) and others (10.3%).

**CONCLUSION**
Skin infections are still the main cause of dermatological consultation in children and further studies should be conducted to know the differences in clinical patterns of various dermatoses in different regions.

**KEYWORDS**
Pediatric, Children, Dermatoses.

**HOW TO CITE THIS ARTICLE:** Roy S, Jindal R, Jain E. Patterns of pediatric dermatoses at a tertiary care centre in Uttarakhand. J. Evid. Based Med. Healthc. 2016; 3(12), 345-347. DOI: 10.18410/jebmh/2016/82

**INTRODUCTION:** Dermatological problems in the paediatric population are common all over the world including rural and urban areas. Wide variation in the patterns and presentations of dermatoses are seen, with eczemas being most common in developed countries and infections and infestations in the developing countries. The incidence of paediatric dermatoses is on a gradual increase but adequate attention is not being paid to it as compared to systemic disorders in children.[1] Childhood skin diseases constitute 30% of all outpatient visit to a paediatrician and 30% of all visits to dermatologists.[2,3] We undertook this study to know the pattern of dermatoses in children in sub Himalayan region as there are very few studies on the spectrum of paediatric dermatoses from Uttarakhand region.

*Submission 28-01-2016, Peer Review 05-02-2016,*
*Acceptance 08-02-2016, Published 10-02-2016.*
*Corresponding Author:*
*Dr. Samarjit Roy,*
*Associate Professor, Department of Dermatology,*
*Himalayan Institute of Medical sciences,*
*Swami Ram Nagar, Doiwala, Dehradun-248140.*
*E-mail: roy.samarjit@rediffmail.com*
*DOI: 10.18410/jebmh/2016/82*

**METHODS AND MATERIALS:** The study was conducted in the Department of Dermatology, Venereology and Leprosy of Himalayan Institute of Medical Sciences Dehradun, which is a tertiary care hospital situated in sub Himalayan region of Uttarakhand. In this retrospective study data of a total of 1012 paediatric patients (up to 18 years of age) with dermatological disorders was recorded from dermatology outpatient registers between the periods of September 2014 to August 2015. Diagnosis was made on the basis of detailed history and clinical examination. Investigations such as KOH examination, Gram's stain smear, Tzanck test, haemogram, wood's lamp examination, skin biopsy and others were carried out as and when required. Ethical clearance was taken from ethical committee of the institute. Results were tabulated and analyzed.

**RESULTS:** During the study period of one year total number of patients seen in dermatology outpatient department was 22000. Out of these, number of paediatric patients were 1012, thus comprising 4.6% of total cases. There were 544 boys and 468 girls. The age and sex distribution is given in table 1. Most common type of dermatoses found in our study were infections and infestations constituting 50.9% (Table 2) followed by dermatitis (16.9%), pigmentary disorders (9.7%), papulo-squamous disorders (4.0%) and hair

disorders (4.0%) (Table 2). (Table 3) displays pattern of various infections and infestations. Impetigo (5.43%) was the most common bacterial infection observed in our study (figure 1) and scabies (19.7%) was the commonest infestation (figure 2). Dermatophyte infections (8.39%) (figure 3) and warts (3.45%) were the commonest fungal and viral infections respectively. Among eczemas atopic dermatitis was the most common eczema (6.42%) and vitiligo (6.71%) and psoriasis (2.17%) were the commonest pigmentary and papulosquamous disorders respectively (Table 4). There were two cases of epidermolysis bullosa (figure 4) and two cases of infantile haemangiomas. Other dermatoses encountered were papular urticaria (3.5%), miliaria (2.9%), milia (0.6%) and pityriasis alba (0.4%).

| Age (Years) | Male (%) | Female (%) | Total (%) |
|---|---|---|---|
| 0-4 | 66(6.5%) | 58(5.73%) | 124(12.2%) |
| 5-9 | 106(10.4%) | 103(10.1%) | 209(20.6%) |
| 10-14 | 128(12.6%) | 118(11.6%) | 246(24.3%) |
| 15-18 | 244(24.1%) | 189(18.67%) | 433(42.7%) |
| **Total** | **544(53.7%)** | **468(46.24%)** | **1012(100%)** |

***Table 1: Age and Sex Distribution of Children***

| Type of dermatoses | Number of cases (%) |
|---|---|
| Infections and infestations | 516(50.9%) |
| Dermatitis | 172(16.9%) |
| Pigmentary disorders | 98(9.7%) |
| Papulosquamous disorders | 41(4.0%) |
| Hair disorders | 41(4.0%) |
| Acne | 36(3.5%) |
| Genetic disorders | 2(0.19%) |
| Haemangiomas | 2(0.19%) |
| Others | 104(10.3%) |
| **Total** | **1012(100%)** |

***Table 2: Distribution of various dermatoses***

| Dermatoses | Number of cases (%) |
|---|---|
| **Bacterial infections:** | |
| Impetigo | 55(5.43%) |
| Furuncle | 32(3.16%) |
| Pitted keratolysis | 20(1.97%) |
| **Total** | **107(10.6%)** |
| **Infestations:** | |
| Scabies | 200(19.7%) |
| Pediculosis | 2(0.19%) |
| **Total** | **202(19.9%)** |
| **Fungal infections:** | |
| Dermatophyte infections | 85(8.39%) |
| Tinea versicolor | 30(2.96%) |
| Candidiasis | 10(0.98%) |
| **Total** | **125(12.35%)** |
| **Viral infections:** | |
| Warts | 35(3.45%) |
| Varicella | 29(2.86%) |
| Molluscum contagiosum | 18(1.77%) |
| **Total** | **82(8.1%)** |

***Table 3: Pattern of infections and infestations***

| Eczemas | No. (%) |
|---|---|
| Atopic dermatitis | 65(6.42%) |
| Non-specific dermatitis | 52(5.13%) |
| Seborrhoeic dermatitis | 35(3.45%) |
| Pompholyx | 20(1.97%) |
| **Total** | **172(16.9%)** |
| **Pigmentary disorders** | |
| Vitiligo | 68(6.7%) |
| Freckles | 30(2.96%) |
| **Total** | **98(9.7%)** |
| **Papulo-squamous disorders** | |
| Psoriasis | 22(2.17%) |
| Lichen planus and others | 19(1.87%) |
| **Total** | **41(4.05%)** |
| **Other Diseases** | |
| Papular urticaria | 36(3.55%) |
| Miliaria | 30(2.9%) |
| Naevus | 23(2.27%) |
| Milia | 6(0.6%) |
| Pityriasis alba | 4(0.4%) |
| Keratosis pilaris | 2(0.2%) |
| Fissured foot | 2(0.2%) |
| Aphthous ulcer | 1(0.1%) |
| **Total** | **104(10.3%)** |

***Table 4: Distribution of eczema-dermatitis, pigmentary disorders, papulo-squamous disorders and other disorders***

***Fig.1: Impetigo contagiosa in a 10 years old boy***

***Fig. 2: Scabies with web space involvement***

***Fig. 3: Tinea faciei showing well defined borders***

***Fig. 4: Epidermolysis bullosa showing dystrophic nails, haemorrhagic blister and atrophic scarring over dorsae of hands***

**DISCUSSION:** Among paediatric dermatoses the most common in our study were infections and infestations constituting 50.9%. Negi KS et al[4] recorded 50% infections and infestations in their study. Infective disorders are reported to be high in most of the studies ranging from 63.5%-85.2%.[5,6,7] These can be attributed to poor hygienic and sanitary conditions. Among infections, fungal infections were the most common in our study followed by bacterial and viral infections. The incidence of fungal infections in our study was 125(12.35%) similar to that reported by Sharma S et al.[1] The incidence of fungal infections in their study was 6.9%.The incidence of scabies in our study was 200 (19.7%). In other studies, the incidence of scabies has varied from 5.1%-22.4%.[4,8] The incidence of pediculosis was low (0.19%) in our study similar to 0.5% as reported by Rao GS et al.[9]

16.9% cases of eczema-dermatitis were recorded in our study, which is similar to study by Sharma S et al.[1] Non-specific dermatitis constituted 5.13% cases in our study that is similar to 6.1% and 6.6% as observed by Sharma S et al[1] and Patel JK et al[10] respectively. Our study recorded 65 cases (6.42%) of atopic dermatitis. Studies from developed countries reported incidence of atopic dermatitis ranging from 3.1%-28%.[11] Our study also recorded a fair number of cases of childhood vitiligo constituting 6.7%. Negi KS et al[4] recorded 2.9% cases of vitiligo from same region. 2.17% cases of childhood psoriasis in our study is comparable to 1.4% cases as observed by Karthikeyan K et al.[12] Papular urticaria constituted 3.55% in our study. Karthikeyan K et al and Ghosh et al observed 5.27% and 4% cases of papular urticaria respectively in their study.[12,13] Interestingly our study recorded two cases of epidermolysis bullosa comprising 0.19% whereas Karthikeyan K et al reported 2.1% cases of genetic disorders.[12]

**CONCLUSIONS:** The pattern of paediatric dermatoses is very much influenced by climate, external environment, dietary habits and socio-economic status[14] Our study highlights pattern of paediatric dermatoses encountered in a tertiary care center in North India. Knowledge of prevalent paediatric dermatoses can help in their effective management.

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