



## A PROSPECTIVE CLINICO EPIDEMIOLOGICAL STUDY OF PEDIATRIC DERMATOSES

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### ABSTRACT

**Background:** Pediatric dermatology is a rapidly upcoming new subspecialty for which few epidemiological studies are available. **Aim:** We aimed to determine the workload associated with this subspecialty and most common presenting complaints among pediatric patients in the OPD, DVL department at Gandhi Hospital, Secunderabad, Telangana. **Methods:** Patients attending DVL OPD at Gandhi Hospital, Secunderabad, Telangana under the age of 16 years for the year of 2015. **Results:** Pediatric dermatology amounts for 10.1% of the workload in our department. Non infectious are 61% and infectious are 39%. **Conclusion:** In developing countries like India, infectious dermatoses are thought to be more common, but our study shows non-infectious dermatoses more common than infectious conditions.

**KEYWORDS:** clinico epidemiological study, dermatoses, children.

### INTRODUCTION

Pediatric dermatology is a rapidly upcoming new subspecialty. Various epidemiological studies have been undertaken across the world including India to study the pattern of pediatric dermatoses. The pattern of skin diseases in India is different across the states, rural and urban areas, hilly areas and in tertiary care hospitals (medical colleges).

### MATERIALS AND METHODS

Patients attending DVL OPD at Gandhi Hospital, Secunderabad, Telangana. under the age of 16 years for the year of 2015.

### AIM

To determine the incidence of various dermatoses in the paediatric age. Predesigned and pretested proforma was filled after taking informed consent. Privacy and confidentiality were maintained. Detailed history and thorough clinical examination were carried out in each patient. Information was recorded using semistructured questionnaire guidelines by using local vernacular language. Family/contact history was also noted. Patients were diagnosed based on detailed history and clinical examination. All cases were treated along with supportive therapy. All children were followed up biweekly till 12 weeks.

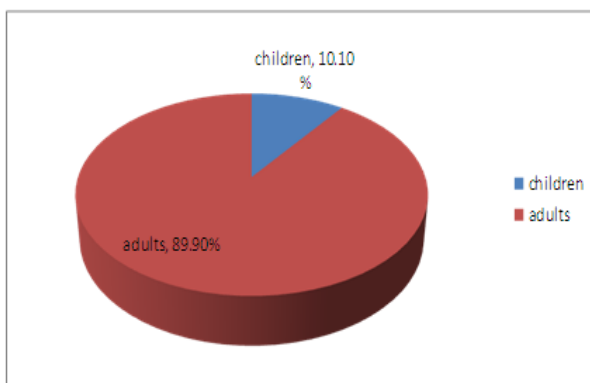
**Inclusion criteria:** All clinically diagnosed cases of dermatoses in children.

**Exclusion criteria:** Cases above 16 years of age.

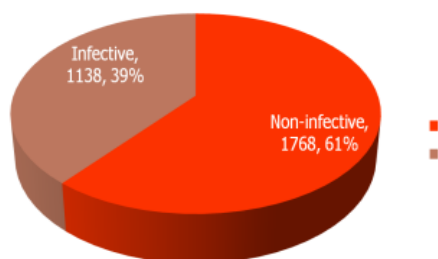
### RESULTS

The epidemiological data was analyzed and the dermatological conditions were grouped into non-infective and infective conditions. The total number of pediatric dermatology cases were 2906. Pediatric cases accounted for 10.1% (Chart 1) of total number of cases. Male to female ratio was 1:1.06. Out of 2906 cases non infectious (chart 2) cases was 61% (1768) and infectious was 39% (1138). Among noninfectious conditions, eczemas(atopic eczema Image 1) was 33.4% (591), papulosquamous (Psoriasis Image 2) 8.4%(150), pigmentary disorders 6.5%(115), Papular urticaria 4.1% (74), nutritional disorders 4%(71) and nevi 2.4%(43).

Among infectious conditions, parasitic infestations were 34.6%(394) in which scabies (Image 3 a and b) were 99.7%(393). bacterial infections constitutes 33%(377) in which impetigo contagiosa (Image 4) was 48%(165), fungal infections were 21%(242) in which T.corporis constitutes 31%(74) and viral infections were 10.9%(125) in which verruca vulgaris was 61.6%(77). All cases were treated with appropriate dose and duration accordingly.



**Chart 1: Total number of pediatric dermatology cases accounted for 10.1% (2906 cases).**



**Chart 2: Out of 2906 cases Non infectious were 61% (1768) and Infectious were 39.1% (1138).**



**Image 3 a and b. Infantile scabies with involvement of trunk along with soles**



**Image 1. 2 years, male child with Atopic eczema**



**Image 4. Impetigo contagiosa in 5 year old child with characteristic honey colored crusts**



**Image 2. 15 years female child with chronic plaque psoriasis –well defined erythematous plaques with silvery white scales**

**DISCUSSION**

Pediatric dermatology is a rapidly upcoming new subspecialty which needs special attention. Now we are in the era of one or none, dealing pediatric dermatology is a real challenge because total history we rely on the

parents and differentiating benign from non benign is difficult in early stages.

Skin diseases are a major health problem in the pediatric age group and are associated with significant morbidity. Skin diseases constitute 30% of all outpatient visit to a pediatrician and 30% of all visits to a dermatologist. Skin diseases in the pediatric population are common all over the world with the reported incidence varying between 9% and 37%.<sup>[1]</sup> In our study it was accounted for 10.1%. Our study revealed that non-infective conditions are more common than infectious conditions. A similar pattern of dermatoses has been reported in a few studies, eczema group has been the predominant dermatoses.<sup>[2]</sup> However in several other studies where eczemas have followed infections.<sup>[1, 3, 4]</sup> Unlike our study, some studies have reported bacterial infections to be the predominant group.<sup>[1, 3, 5]</sup> Sayal *et al.*<sup>[4]</sup> reported fungal infections to be more common. These differences among infective dermatoses can possibly be attributed to the regional climatic variations with cold and low humidity prevailing in Kashmir. Reasons skin diseases in the pediatric age group can be transitory or chronic and recurrent. The chronic dermatoses are associated with significant morbidity and psychological impact. Pediatric dermatoses require a separate view from adult dermatoses as there are important differences in clinical presentation, treatment and prognosis. Dermatoses in children are more influenced by socio-economic status, climatic exposure, dietary habits and external environment as compared to adults. Cutaneous infections are common in children during school going years. Most of the cutaneous diseases which result from intrinsic genetic abnormalities also have onset in the pediatric age-group.

#### **Differences in treatment of Paediatric and Adult Patients**

Conservative management is best. Surface area is more in children than adults. Absorption of topical drugs is more in children. Try to use lowest effective dose of medications. Do not use treatments which may retard growth or mental development. Avoid off-label uses of medications.

#### **Classification of pediatric skin diseases**

**Infective disorders:** Bacterial, Viral, Fungal.

**Infestations:** Scabies, Pediculosis, Parasitic,

**Inflammatory/ Immunological disorders:** Eczemas, Psoriasis, Lichen planus.

**Genetic/Nevoid disorders:** Hemangiomas, Linear epidermal nevus, Epidermolysis bullosa, Tuberous sclerosis, Neurofibromatosis, etc.

**Neoplastic disorders:** Langerhans cell histiocytosis, Mastocytosis.

**Neonatal Dermatoses: Physiological:** Vernix caseosa, mongolian spot, physiological scaling, sebaceous hyperplasia, Sucking blisters, physiological jaundice, miliaria and milia.

**Pathological:** Erythema toxicum neonatorum, transient neonatal pustulosis, neonatal acne.

**Infantile and Childhood dermatoses:** Cradle cap, diaper dermatitis, nevus depigmentosus, linear epidermal nevus, haemangiomas, vascular malformations, sturge Weber syndrome, neurofibromatosis, tuberous sclerosis, epidermolysis bullosa and ichthyosis.

**Adolescent Dermatoses:** Acne vulgaris, dandruff, striae, pseudo-acanthosis nigricans, contact dermatitis to cosmetics, perfumes, artificial jewellery / accessories (metals) and hyperhidrosis.

The high prevalence of pigmentary disorders predominantly accounted by Mongolian spots (71.9%) has not been reported by many. Further genetic and epidemiological studies are awaited to explain its frequent occurrence. In our study, the eczema group accounted for 12% of all dermatoses and was most common in the preschool age children. In another study conducted in North India, eczemas were noted in only 5.2% of school children.<sup>[6]</sup> This indicates that eczema is commoner in Kashmir; this higher prevalence may be linked to genetic factors. The prevalence of nevoid disorders in our study was 1.1%. Earlier studies on the prevalence of pediatric dermatoses from Kashmir valley, that have not enrolled infants and preschool children, have reported this figure to be 0.4%.<sup>[7]</sup> The higher prevalence could be due to inclusion of children aged less than 6 years in our study. The lower proportion of acne which constituted 3.2% of all the cases is probably due our study being limited to the age group below 16 years. Seasonal and dietary variations could also account for this difference. Genetic disorders such as ichthyosis were frequently encountered in our study. The higher occurrence of these keratinization disorders in our population can be explained by the fact that our institute is a referral center. Moreover, the incidence of consanguineous marriage is high among the Muslim population of our region and may explain the higher prevalence of genodermatoses.

#### **CONCLUSION**

Our study revealed that non-infective conditions are more common than infectious conditions. Reasons- 1. Tertiary care centre 2. Urban population. Among non infective conditions eczemas (atopic eczema) were predominant and among infective conditions parasitic infestations were predominant. In developing countries like India, infectious dermatoses are thought to be more common, but our study shows non-infectious dermatoses more common than infectious conditions.

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