

A STUDY ON PAEDIATRIC DERMATOSES IN CHILDREN ATTENDING OPD OF GVR HOSPITAL, KURNOOL

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ABSTRACT

BACKGROUND

Paediatric dermatoses include various diseases of neonates such as sebaceous hyperplasia, milia, sucking blisters etc., cutaneous infections such as impetigo, folliculitis, furuncles etc., arthropod bites and infestations such as scabies, pediculosis, nutritional dermatoses such as acrodermatitis enteropathica, essential fatty acid deficiency, kwashiorkor etc., eczematous disorders such as atopic dermatitis, seborrhoeic dermatitis, etc., vesiculobullous disorders such as erythema multiforme, SJS/TEN, hypersensitivity disorders like urticaria, papular urticaria, angioedema etc., photosensitivity diseases like acute sunburn reactions, phototoxic reactions, porphyrias etc., epidermal diseases like psoriasis, lichen planus etc., keratinisation disorders like ichthyosis vulgaris, palmoplantar keratosis, etc., The epidemiological aspects of various childhood dermatoses have been the subject of study by various researchers for over a century, but the accurate incidence or prevalence could not be made out because: lack of properly designed guidelines for evaluation, inadequate and improper compilation, lack of parental awareness and knowledge about the problems, home remedies, treatment by quacks not being reported.

MATERIALS AND METHODS

It is a hospital based observational study, which was conducted at Govt. general hospital, Kurnool and GVR Hospital, Kurnool. The study included 14,730 children who attended the above departments, of them, 5775 children were males and 5995 children are females. The study was conducted during the period of 1 year from March 2015-June 2016.

RESULTS

Infections are the commonest (30.44%) followed by Infestations (14.40%). Secondary Infections were the commonest bacterial infections (25.37%). Among the infestations Scabies was the most prevalent (77.76%)

CONCLUSION

In our study, it was observed that 28-30% of the children aged below 12 years attending paediatric outpatient department, GVR Hospital and 30-40% of the OPD of DVL department in GGH Kurnool are children aged below 12 years. Male children outnumbered female children in all the skin problems. Minor dermatological problems of the newborn constitute most common form of diseases of neonate.

KEYWORDS

Sebaceous hyperplasia, Milia, Sucking Blisters, Impetigo, Folliculitis, Furuncles, Scabies, Pediculosis, Acrodermatitis enteropathica, Essential Fatty Acid Deficiency, Kwashiorkor, Atopic Dermatitis, Seborrhoeic Dermatitis, Erythema Multiforme, SJS/TEN, Urticaria, Papular Urticaria, Angioedema.

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BACKGROUND

Skin fulfils numerous and varied vital functions. Among these are physical and immunological protection from harmful environmental agents, sensory perception, temperature regulation, water and electrolyte homeostasis and regulated exchange of gases. Skin development starts in utero during

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the first trimester of pregnancy and continues with the functional maturation of stratum corneum (SC) at around 24 weeks of gestational age; a well-defined SC, however, is not visible before 34 weeks. As part of barrier maturation during the last trimester, we observe also the formation of vernix caseosa, a protective coating of the skin, derived from sebaceous secretions and dead corneocytes and largely composed of water, lipids and proteins. Skin maturation is a gradual process and level of maturity is a function of gestational age. The normal full-term baby is born with the complement of completely functional skin, with fully developed barrier function and a greatly increased surface area to volume. In the preterm baby, the epidermis is thinner than that of full term baby. The stratum corneum is also very thin with impairment of barrier function. Transepidermal water loss is greatly increased in the

preterm when compared to term infants. Both the term and preterm are at risk of toxicity from topically applied substances. A full complement of anatomically normal eccrine sweat glands by the 28th week of gestation, but they are functionally immature in preterm babies. The main difference of the skin of a neonate and that of an adult is the structure of dermis and presence of vernix caseosa. The total thickness of the dermis of a neonate is less than that of an adult. The collagen bundles are smaller, and the elastic fibres are immature. The vascular components and neural components are well organised. Skin diseases in the paediatric population are common all over the world including rural and urban areas. There is variation among the presentation of skin diseases. Among them, most common are Eczemas in developed countries and Infections or infestations in developing countries. Paediatric dermatology deals with diseases and skin care requirements in individuals from birth to adolescence, a relatively short period of lifetime where significant physiological, psychological and maturity changes take place. During the school years, the child is exposed to a wide variety of pathogens and potential irritants.¹ The pattern of skin disease is a consequence of poverty, malnutrition, overcrowding, poor hygiene, illiteracy and social backwardness in many parts of India. It was observed that 28-30% of children aged below 12 yrs. attending paediatric outpatient department present with dermatological problems and 30-40% of the outpatient attending the dermatology venereology leprology department of GGH, Kurnool are children aged below 12 years. Rashmi Sarkar et al in their study observed that 30% of the out patients visiting the dermatology department were children under 12 years. The commonest skin problems present in the children are infectious diseases and infestations. Male children outnumber the female children in infectious diseases and the female children predominate in infestations. The age specific prevalence of these problems is 71% in children aged below 6 years and 29% in children aged between 7 and 12 years. The number of infestations increase with age and the infections come down in frequency. Various factors like poor socio-economic status, overcrowding unhygienic surroundings and lack of knowledge about personal hygiene contribute to the increased prevalence of these infections. Inadequacies in the primary health care facilities add to the severity of these problems. The next common group of skin disorders includes eczema and dermatitis. The climate and dietary habits play an important role in the increased prevalence of these problems. Dermatoses due to nutritional deficiency are the common problem. among them phrynoderma is the commonest and this is attributed to the dietary habits of the people, whose diet is deficient in vitamin-A, C, E and essential fatty acids pellagra, Nasolabial, angular cheilitis and glossitis are some other conditions prevalent in children due to the dietary deficiencies. Papulosquamous disorders like pityriasis rosea, lichen planus are more common in children than the rest. Increased prevalence of viral infections is seen among children during monsoons. Among the low- socioeconomic groups,

overcrowding help in spreading the viral infections during the season. Genodermatoses like Epidermolysis bullosa, Ectodermal dysplasias xeroderma pigmentosum are seen frequently in childhood. Keratinizing disorders like ichthyoses are commonly seen during childhood. Autoimmune disorders like vitiligo and alopecia areata are observed in a few numbers of cases.

Aim of the Study

To know the prevalence of various dermatoses occurring in children at various dermatoses occurring in children at various groups aged below 12 years.

Inclusion Criteria

All the children less than 12 years of age who attended the dermatological OPD in GGH, Kurnool and GVR Hospital, Kurnool.

Exclusion Criteria

1. All the children above 12 years of age group.
2. Children, whose parents, didn't give consent for the study.

MATERIALS AND METHODS

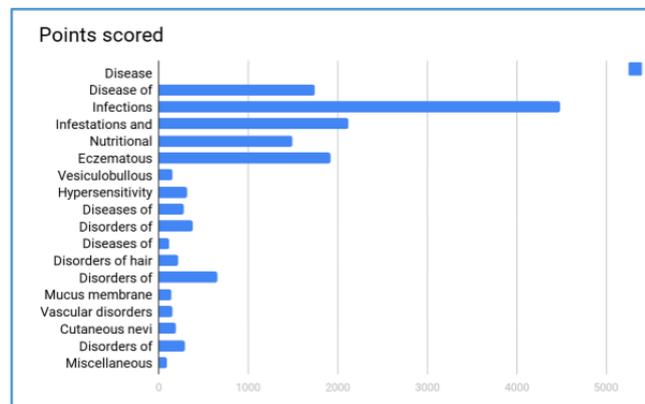
It is a hospital based observational study, which was conducted at Govt. general hospital, Kurnool and GVR Hospital, Kurnool. The study included 14,730 children who attended the above departments, of them, 5775 children were males and 5995 children are females. The study was conducted during the period of 1 year from March 2015-June 2016.

RESULTS

The different types of dermatoses seen during study period were categorized according to the aetiology. Infections were the commonest causes of various dermatoses constituting 30.44%. The Infestations were the next common group observed in 14.40% of the cases. The eczematous disorders were seen in 13.04% of the cases. The next common groups include nutritional disorders 10.12% of the cases. Diseases of newborn 11.86% of the cases and the disorders of sebaceous and sweat glands 4.42% of the cases. Keratinization disorders in 2.52% of the cases, Hypersensitivity disorders in 2.14% of the cases, Pigmentary disorders in 1.31% of the cases. The disorders of the epidermis, dermis, hair and nails, mucus membranes, vascular and vesiculobullous disorders constituted a minority of the total number.

Disease	Number	Percentage
Disease of neonate	1748	11.86
Infections	4484	30.44
Infestations and Arthropod bites	2122	14.40
Nutritional dermatoses	1491	10.12
Eczematous disorders	1922	13.04
Vesiculobullous disorders	152	1.03
Hypersensitivity disorders	315	2.14
Diseases of epidermis	280	1.90
Disorders of keratinization	372	2.52

Diseases of dermis	109	0.74
Disorders of hair and nails	212	1.44
Disorders of Sweat & sebaceous glands	652	4.42
Mucus membrane disorders	138	0.94
Vascular disorders	158	1.07
Cutaneous nevi	194	1.07
Disorders of pigment	289	1.31
Miscellaneous	92	0.62
Table 1. Showing Pattern of Various Dermatoses (n=14, 730)		



Graph 1. Showing Pattern of Various Dermatoses (n=14, 730)

DISCUSSION

In our present study, Infections (30.44%) were the commonest dermatoses followed by Infestations (14.40%). Negi et al² in their study found that infections and Infestations contributed to 505 of the cases. Thappa DM et al³ found that 54.5% of all their cases are Infections and Infestations. In various other studies also, Infections and Infestations were the most common and prevalent ranging from 35.6% to 85.2%. Dogra S et al⁴ in their study observed that prevalence of eczemas was 13.8%. Ruiz-Maldonado R et al,⁵ the prevalence of eczemas was 12.9%. The prevalence of Nutritional dermatoses in Thappa DM et al study was only 2.8% whereas in our study it was 10.12%. Ghosh SK et al⁶ and Porter MJ et al⁷ did not encounter any of the keratinisation disorders in their study whereas it was 2.52% in our study. Miliaria is prevalent in 4.77% of the cases whereas in Bechelli LM⁸ it was 2.7% of the cases. The high prevalence of Miliaria in our study could be due to increased temperature and humidity in our area during summer that results in increased sweating. Kumar B et al reported an incidence of 0.09% of connective tissue disorders in the school children in north India. Thappa DM et al³ found that 5.7% of all their cases are Pigmentary disorders whereas 1.31% in our present study. This study brings in to light the unique features of tropical childhood dermatoses, such as high frequency of dermatoses like infections, infestations, nutritional disorders and environment disorders like Miliaria and Papular urticaria. Various epidemiological studies have been undertaken across the world including India to study the pattern of paediatric dermatoses. Epidemiological data in India studies in based on the pattern of paediatric dermatoses in both

urban and rural areas and in tertiary care hospitals. The pattern of skin diseases in India is different across the states, rural and urban areas and hilly areas. In a study of eastern part of India in 1994, a total of 500 children (<12 years) attending dermatology OPD were recruited to study the pattern of common dermatoses, in this study pyoderma was the most common skin disease followed by the scabies eczema, molluscum papular urticaria vitiligo miliaria and nevi. A study from south India of children of <14 years showed that infections and infestations were the most common paediatric dermatoses. Secondary pyoderma was more common than primary pyoderma. paediatric patient constituted 20% of total dermatology OPD patient an epidemiologic study from Garhwal, a hilly area of Uttar Pradesh in children <14 years showed that pediculosis capitis was the most common dermatosis being three times more common in girls, followed by pyoderma, pityriasis alba and eczema nutritional deficiency, dermatoses were also common in this region [common manifestation included sparse hair and pigmented skin. In other study among school children age group of 6-14 years from Chandigarh, 38.8% of children had one or more identifiable /apparent skin disease among skin infections, pyoderma (impetigo, folliculitis, infected arthropod bite) were most commonly followed by fungal, viral and mycobacterial infections. Majority of Indian population stays in rural areas and children below 14 years constitute about 38% of the population. In a school survey of middle and high school children of a rural area in Himachal Pradesh, all children (201) were found to have one or more dermatoses. Pediculosis capitis was the most common disease followed by pityriasis simplex (Alba), warts, scabies, pyoderma and papular urticaria. In many developing countries, though skin diseases are very common, they are not regarded as a significant health program even when serious diseases may be heralded by skin changes. The present study is intended to know the magnitude of skin diseases, pattern of various dermatoses, factors contributing to those dermatoses pattern of childhood dermatoses in children aged below 12 years attending the outpatient clinic of GVR children hospital and Paediatric & DVL department of government medical college, Kurnool.

CONCLUSION

In our study, it was observed that 28-30% of the children aged below 12 years attending paediatric outpatient department, GVR Hospital and 30-40% of the OPD of DVL department in GGH Kurnool are children aged below 12 years. Male children outnumbered female children in all the skin problems. Minor dermatological problems of the newborn constitute most common form of diseases of neonate. Our study has brought out the prevalence of various dermatoses among children below 12 years. Following the proposed guidelines for basic skin care in newborn will reduce neonatal dermatoses.

Recommendations

Improvement in sanitary conditions, improving the nutrition and proper health education to the public in general and the rural medical practitioners in particular is needed to decrease the prevalence of dermatoses in children. Periodic health checkup of all children in schools and residential hostels, health education, and timely treatment will reduce the incidence of scabies, pediculosis, and fungal infections. Exposure and adequate training under an expert is needed during the training period so as to decrease the referrals during clinical practice. One-month mandatory posting will benefit the treating paediatrician in handling the problem more confidentially.

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