

Pattern and burden of dermatoses in paediatrics: A paediatrician's perspective

¹Dr. Halak Vasavada, ²Dr. Snehal Patel, ³Dr. Panchshila Parmar, ⁴Dr. Katha Vyas, ⁵Dr. Kamesh Patel

^{1,2,3}M.D. Pediatrics, Smt. Shardaben General Hospital, Saraspur, Ahmedabad, Gujarat, India
^{4,5}Pediatrics Second Year Resident, Smt. Shardaben General Hospital, Saraspur, Ahmedabad, Gujarat, India

Corresponding Author:

Dr. Halak Vasavada (halakvasavada@yahoo.com)

Abstract

Concerns related to skin are very common reason for parents to seek paediatricians help. The present study aims to study role of a paediatrician in managing dermatological disorders and need for referrals, the data of which is scarce in Indian scenario. This study showed current pattern of paediatric dermatoses in children at tertiary care hospital, Ahmedabad with a high frequency of infection and infestations with young teenagers as identified focus group for need of intervention.

Keywords: Dermatoses, pediatric skin condition, papulosquamous, skin infection

Introduction

Paediatric dermatology is a branch of dermatology that deals with the diagnosis, treatment, and prevention of skin diseases in children aged less than 16 years. Skin diseases in children require a separate focus as there are differences in their presentation, management and prognosis from adult dermatoses. Probable determination of prevalence of dermatoses in paediatric age group has been achieved by epidemiological and institutional researches done which are representative of large geographical areas. Dealing with a child with skin disorders requires special skills as they differ in clinical presentation, treatment, and prognosis when compared with adult dermatosis. The majority of dermatoses in newborns are physiological and transient, while genodermatoses or hereditary, congenital and nevoid anomalies which usually are first seen during childhood ^[1].

It has been observed that a paediatrician encounters almost 30% of all his outpatient children having dermatological problems while a dermatologist encounters about 30% of children visiting the outpatient department ^[2, 3].

Studies of paediatric population suffering from skin diseases can play an important role in public health and policy making. Many factors like age, race, geographical area, climate, nutrition, hygiene, season, heredity and socioeconomic status influence the pattern of skin diseases in children ^[4, 5, 6, 7]. Various studies conducted in different parts of the world shows different patterns of skin diseases in children. This study aims to find different patterns of skin diseases in paediatric population and to study the role of primary care paediatrics in managing common dermatological conditions in children and the need of dermatological

referrals. The incidence of skin diseases among children in various parts of India has ranged from 8.7% to 38.8% in different studies usually school-based surveys [8].

The present study will help in formulating strategies to improve nutrition, primary health care, and skin hygiene, etc. and provision of health services. The present study will also enhance previous knowledge of pattern and trend of paediatric dermatoses in the affected children.

Methods and Materials

Type of study: A Prospective Observational Study.

Study period: 6 months (January 2019 to June 2019).

Study conducted at: A tertiary care teaching hospital in Ahmedabad.

Inclusion criteria: Age group: 1 month to 12 years-Came to paediatric OPD/ Admitted in paediatric ward/Found to have dermatological issue.

The present study is a prospective observational study, conducted in a tertiary care teaching hospital from January 2019 to June 2019.

Out of 5406 patients, 502 patients (Patients consulted during routine OPD and Emergency hours during this study period), aging from 1 month to 12 years, who came to paediatric OPD or were admitted in paediatric ward or found to have an or associated dermatological issue were included in this study. Patient's details were recorded using standard proforma.

Out of total patients, both who came to OPD or admitted in paediatric ward, some of them were diagnosed by paediatricians by only clinical parameters, while for doubtful and not diagnosed cases, expert opinions of dermatologists were taken.

Demography, clinical presentation and treatment were recorded and investigations and treatment were done as per standard protocols in coordination with department of dermatology.

Patients were classified under different types of skin lesions and patient's data interpretation was done and the results were tabulated and analysed using statistical software.

Results

A) Demography

Age and Gender

Skin conditions occur in all age groups and both genders, there is no significant difference, males affected are 55.20% while 44.80% females are affected.

Paediatric skin disease is seen more in age group of 1-6 years, around 46.80%. These results are comparable to study done by Jawade, *et al.* [9], in South Gujarat region for dermatosis in paediatrics, which shows around 58.37% males and 41.62% females were affected.

Table 1: Skin lesion as a chief presenting factor or an associated finding?

	Skin lesion as a chief presenting factor	Associated with other diseases	Total
OPD	320(73.44%)	115(26.55%)	435(100%)
Indoor	0	67(100%)	67(100%)
Total	320(63.74%)	182(36.25%)	502(100%)

Out of total outdoor patients, in 318 (73.44%) cases, skin lesions were the presenting factor, while 115 (26.55%) cases were associated with other lesions.

More than 1/3rd children attending paediatric for various reasons, have associated some skin related lesions.

Table 2: Outdoor/indoor patients

	< 1year	1-6 years	>6 years	
Outdoor	109	208	118	435(86.60%)
Indoor	21	28	18	67(13.40%)
Total	130(26.00%)	236(46.80%)	136(27.20%)	502(100%)

Most patients of skin disease were OPD/outdoor, contributing to around 86.60%. As it is tertiary care centre, indoor patients no. was also high, 13.40%.

Table 3: Pattern of Paediatric skin disorders

Infectious disorders	254(50.80%)
Allergic disorders	62(12.40%)
Papulosquamous disorders	76(15.20%)
Disorders of pigmentation	23(4.60%)
Disorders of hair and nails	5(1.00%)
Malignant conditions	1(0.20%)
Disorders of keratinization	6(1.20%)
Systemic disorders	3(0.60%)
Disorders of mucous membrane	1(0.20%)
Nutritional skin lesions	48(9.60%)
Sexually transmitted disease	--

Out of 502 cases, 254(50.80%) cases were of infectious diseases, while 76(15.20%) cases were of papulosquamous diseases. Allergic disorders contributed to 62(12.40%) cases, while nutritional skin lesions contributed to 48(9.60%) cases. Not a single case of sexually transmitted disease was noted. Probably they would be attending dermatology OPD.

Out of 502, papulosquamous disorders were seen in 77(15.20%) patients. In contrast to study done by Jawade *et al.* ^[9], which shows 9.10% of papulosquamous skin lesions.

Compared to study done by Reddy *et al.*, ^[10], pattern of dermatosis among pediatric population, eczematous diseases contributed to 12.6%, while study done by Thakare S *et al.*, ^[11] in Maharashtra in 2011-12 showed 18.59% of eczematous disease.

Table 4: Need for dermatological referral/opinion?

Not needed	307(61.15%)
Needed	195(38.84%)

This study shows, around 61.15% cases, there was no need for dermatologist opinion to confirm the diagnosis, while 38.84% cases needed dermatological referral.

Table 5: Dermatological diagnosis of hospitalized children with associated skin disorders

Dermatological diagnosis	Outcome			Total
	Morbidity		Mortality (Death)	
	Discharge (96.92%)	Lama (3.07%)		
Seborrheic dermatitis	5	0	0	5(7.46%)
Impetigo	5	1	0	6(8.95%)
Scabies	9	1	0	10(14.92%)
Measles	9	0	0	9(13.43%)
Chickenpox	10	0	0	10(14.92%)
Tinea infections	4	0	0	4(5.97%)
Herpes zoster, herpes labialis	2	0	0	2(2.98%)
Atopic eczema	1	0	0	1(1.49%)

Aphthous ulcer	1	0	0	1(1.49%)
Pyoderma	2	0	0	2(2.98%)
Vitiligo	4	0	0	4(5.97%)
Miliaria	2	0	0	2(2.98%)
SJS	1	0	0	1(1.49%)
LCH	1	0	0	1(1.49%)
Viral exanthema	2	0	0	2(2.98%)
Acne	1	0	0	1(1.49%)
Fixed drug eruption	1	0	0	1(1.49%)
Hemangioma	1	0	0	1(1.49%)
Salmon patch	1	0	0	1(1.49%)
Intertrigo	1	0	0	1(1.49%)
Atopic dermatitis	1	0	0	1(1.49%)
Plantar wart	1	0	0	1(1.49%)
				67(13.4%)

Out of 67 indoor patients, chicken pox and scabies were most common, 14.92%, followed measles, contributing to 13.43%.

There is 0% mortality, which shows very good prognosis and outcome, discharge rate is 96.92% while 3.07% are LAMA (left against medical advice).

Discussion

This prospective observational study was an attempt to study occurrence of different type of skin manifestations in 502 patients of age 1 month to 12 years of age group, to find out pattern and burden of skin disease in this age group. The study concludes:

Skin conditions occur in all age groups and both genders, males affected were 55.20%, while 44.80% females affected. There was no significant gender preponderance for skin manifestations.

Around 86.60% patients were outdoor/OPD, while 13.40% patients were indoor, out of total. In which, 73.44% outdoor patients presented with skin lesions, while 26.55% were associated with other diseases.

Out of 502 patients, 50.80% cases were infectious disorders, Papulosquamous disorders contributes 15.20%, Allergic skin lesions were 12.40%, Allergic skin lesions were 12.40% of total cases, Malignant conditions were seen in 0.2% cases, 9.60% cases were nutritional skin lesions. Out of total cases, 61.15% cases were well diagnosed by pediatrician and there was no need of dermatological referral, while 38.84% cases needed dermatologist opinion.

Out of 67 indoor patients, chickenpox and scabies were most common 14.92%, while measles contributing 13.43% cases.

Conclusion

About 9 to 10% patients attending paediatric OPD for various reasons have an overt or associated skin lesions, out of which about 50% of skin related consultation in paediatrics are related to infectious causes.

About 60% to 70% of common dermatological disorders could be easily dealt with basic knowledge of paediatric dermatology by a paediatrician, only around 30% cases needed a dermatological opinion.

There are very few dermatoses, occurring in pediatrics, which requires urgent attention and hospitalization. If given proper care and treatment, they also have a good prognosis.

It is high time that teaching institutes include dermatology postings for pediatric residents during their residency to learn dermatological conditions more precisely and accurately which

would be very helpful for their future practice.

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