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ORIGINAL ARTICLE

Clinical Pattern and Frequency of Pediatric Dermatoses at Social Security Teaching Hospital, Lahore

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ABSTRACT

Objective: To study the clinical pattern and frequency of pediatric dermatoses at Dermatology department Social Security teaching hospital, Multan road Lahore.

Methods: Five hundred and thirteen children up to 12 years presenting to the dermatology OPD of Social Security teaching hospital in Lahore located at Multan road with different kind of skin diseases also were included in the respective study consisted on 4 months overall research period. On the basis of age all subjects were segregated into two different groups. One group comprised of patients from 1-6 years and the group from 7-12 years. Diagnosis was made by thorough history and clinical examination mainly. All patients were categorized into various groups on the basis of etiology.

Results: Out of 513 children with skin diseases, 323 (62.96%) were males and 190 (37.03%) were females. 300 (62.96%) children were of the age group 1-6 years and 213(37.03%) children were of the age 7-12 years. Different infestations and certain infections were observed in 349 (68.03%) patients and 164 (31.96%) patients presented with various non-infective dermatomes.

Conclusion: Infections and infestations were most commonly seen dermatoses as compared to non-infective dermatoses in this study.

Keywords: Clinical pattern, dermatoses, frequency, infections, infestations.

INTRODUCTION

Different researches have concluded that skin infections and diseases are badly affecting health and one of the strongest reasons behind disabilities and high distress among the society.[1, 2] Different types of infections related to skins are common particularly in childhood life due to the skin condition of children and infants.[3, 4] These all skin infections have negative impact on the children's life and also disturb their physical development and natural growth. These may also cause anxiety to parents.[5] The extent presence of skin issues could be found differently among the whole world. The consistent impact of certain skin issues could be differ in other societies of the world.[6] Skin infections trends are based on the countries racial, educational, ecological, socioeconomic and environmental parameters'.[7, 8] Particularly group of pediatric age children may face higher skin issues. As per different studies, skin issues ratio among the children is about 9%-37%.[7, 10] It has been observed that about third portion among all the patients who visits OPD belongs to skin problems and similarly, about 1/3 of them are the children.[11] Patterns of the skin problems among children founded differently as per gender, geographical presence, climatic situation and age. Other related factors behind skin problems among children include lower education level among the parents, living situation overcrowded, unhygienic circumstances and parental lower status of socioeconomic.[12] Ratio of skin problems is higher in rural societies in comparison to urban societies.[13] "Pediatric dermatomes vary considerably from adult dermatoses in both presentation and clinical management needing special emphasis, it can be of short duration or chronic and recurrent creating psychological issues, [10, 14] in developing countries, infections and infestations are predominant, whereas eczema has been found to be the more common in developed countries, [4, 12] pediatric population constitutes the cornerstone of the community, skin diseases in children are observed frequently and their categorization are essential for the preparation of academic, health and research plans".

The objective this study is to analyze the pattern and etiologies of different dermatomes among the children from the age of first month to twelve years, in a Social Security Teaching Hospital, locate at Multan Road Lahore ("a tertiary care hospital catering to the labor community"). Such studies may be helpful to take future initiatives in relevance to public health issues and preventive type medicine.

MATERIALS AND METHODS

This observational and prospect based research was conducted in department of dermatology at Social Security Teaching Hospital located at Multan Road Lahore ("a tertiary care hospital catering to the labor community"). Non probability consecutive sampling was done. This study was conducted between the periods of February 2018 to May 2018. Children below one month of age were excluded from the study. All attended children at the OPD of department of dermatology were completely observed from the age group of first month to twelve years of both genders. Children with "life threatening conditions ie chronic liver disease, chronic renal failure and also on medications (like anti-cancer, anti-tuberculosis, and steroids) were not included in the research". All the set of roles for this research was fully authenticated by the committee of ethics from the concerned institute and there was a written consent taken from the parents and even from the guardians to utilize their bio data for the research work.

For the study all 513 OPD attending children were included in sample size. Pre-designed questionnaire with all required details like history and related information were filled at OPD sites during children attendance to the dermatologists for a skin problem checkup. Diagnosis was "primarily made clinically based on the history, detailed general, systemic and coetaneous examination and clinical features, relevant investigations like complete blood picture, skin biopsy, Tzank smear, Gram's staining, wood lamp examination, KOH examination etc, were carried out on few cases where found essential for diagnosis". A detailed analysis was designed on the base of gender and age with further segregation into clinical profiles, etiologies and patients. SPSS Version 15 was used to enter the collected data and to avail a detailed systematic and statistical analysis for the research work.

RESULTS

For the study total data consists of 513 children patients. About 300 patients with 58.5% fall in the group of 1-6 years age and remaining 213 patients with 41.5% fall in the group of 7-12 years age. In comparison to gender about 323 patients with 63% belongs

to male and about 190 patients with 37% belongs to female, whereas the ratio is about 1.7:1 (Table 1).

Table 1: Age and Gender Distribution of Study Population (n=513)

Age	Males	Females	Total
1-6 years	186 (62.0%)	114 (38%)	300 (58.5%)
7-12 years	137 (64.30%)	76 (35.70%)	213 (41.5%)
T0tal	323 (62.96%)	190 (37.03%)	513 (100%)

The most common "dermatomes in this study group was infective dermatoses (349, 68.03%) as compared to non-infective dermatoses which was present in 164 (31.96%) patients as shown in Figure 1.

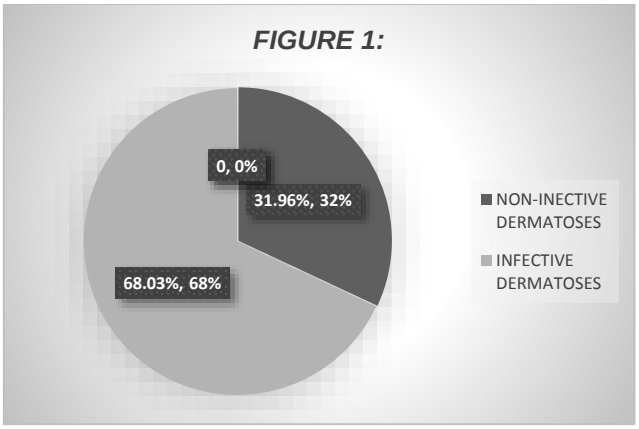

Figure 1: Infectious and non-infectious Dermatoses

Infective dermatomes group was further subdivided into bacterial infections, viral infections, fungal infections and parasitic infestations (Table 2),

Table 2: Frequency Of Various Infective Dermatoses In Study Population (n=513)

Infections	1-6 years	7-12 years	Total	Percentage
Bacterial	101	86	187	36.45%
Viral	39	42	81	15.78%
Parasitic	29	12	41	7.99%
Fungal	22	18	40	7.79%
Total	191	158	349	68.03%

Table 3: Distribution Of Various Infections And Infestations

Disease	1-6 years	7-12 years	Total	Percentage
BACTERIAL	101	86	187	36.45%
Pyoderma	38	28	66	35.29%
Impetigo	32	21	53	28.34%
Folliculitis	20	29	49	26.20%
Ecthyma	11	9	20	10.69%
VIRAL	39	42	81	15.78%
Measles	22	9	31	38.27%
Varicella	13	12	25	30.8%
Molluscum	4	15	19	23.45%
Contagiosum	0	3	3	3.70%
Warts	0	3	3	3.70%
H. Simplex				
PARASITIC	29	12	41	7.99%
Scabies	22	8	30	73.17%
Pediculosis	7	4	11	26.82%
FUNGAL	22	18	40	7.79%
Tinea capitis	11	2	13	32.5%
Tinea	2	9	11	27.5%
corporis	3	4	7	17.5%
Tinea facei	5	1	6	15%
Candidiasis	1	2	3	7.5%
Tinea cruris				
TOTAL	191	158	349	68.03%

Overall, the bacterial infections (187, 36.45%) were more prevalent, followed by viral infections (81, 15.78 %), parasitic infestations (41, 7.99%) and fungal infections (40, 7.79%)", as shown in Table 2. Amongst the bacterial infections, the most prevalent condition was pyoderma (35.29%) followed by impetigo (28.34%), folliculitis (26.20%) and ecthyma (10.69%). Measles (38.27%) highly spreading skin infection followed by varicella (30.8%), moll scum contagious (23.45%).Out of patient with fungal infections, 32.5% had tinea capitis, 27.5% had tinea corporis, and 17.5% had tinea facei. Scabies (73.17%) was the most frequently occurring among the infestation group followed by pediculosis (26.82%) as shown in Table 3.

Out of 513 cases under study, frequency of various non-infective dermatoses is shown in Table 4 .Dermatitis constitutes majority (23.58%) of the study group. The most frequently seen dermatitis was sebborheic dermatitis (39.66%) followed by contact dermatitis (28.09%), atopic dermatitis (16.52%) and pityriasais alba (15.70%).

Table 4: Frequency of Various Non-Infective Dermatoses (n=513)

Disease	1-5 years	7-12 years	Total	Percentage
Dermatitis	87	34	121	23.58%
Sebborheic	35	13	48	39.66%
dermatitis	23	11	34	28.09%
Contact dermatitis	12	8	20	16.52%
Atopic dermatitis	17	2	19	15.70%
Pityriasis alba				
Urticaria/drug rash	16	8	24	4.67%
Post inflamatory Pigmentation	3	6	9	1.75%
Keloid	1	3	4	0.77%
Psoriasis	0	2	2	0.38%
Icthyosis	1	0	1	0.19%
Hemangioma	1	0	1	0.19%
Total	109	55	164	31.96%

DISCUSSION

Pediatric skin problems are highly spreading among the whole world in both urban and rural areas.[1, 11] Although pediatric dermatoses are not significant factor for childhood mortality but they cause substantial morbidity. Children skin is very sensitive, delicate and so more prone to develop different skin diseases easily. In many areas of Pakistan, skin issue could be reason of following factors like poor living standard, inadequate nutrition's, multi-people living at site, un-hygienic situation, low education and poor sanitary conditions. The evaluation for skin disorders is thus considered to be an important element of pediatric health related implications.[1, 3] The existence of different kind of skin issues in the children can be an important parameter for assessing the overall health and hygiene status of any community.

The majority of the "patients in this study belong to age group 1-6 years (58.5 %) followed by age group 7-12 years (41.5 %), in a study by Rabia et al, 45.7% patients belong to age group 1-4 years, and 32.6% belonged to 5-8 years and 21.7 % patients belonged to age group of 9-12 years,[3] but in another large trial by Balai et al, out of 46,321 only 2.16% patients were up to 5 years of age".[9]

In this study male dominance was seen as per gender ratio of 1.7:1(male: female). Similar male predominance noted in many related researches like conducted by Geet et, al. (M: F = 1.59:1) and Javed et al showing 65% males and 35% females. [12, 14]

The most commonly observed "dermatoses in this study were infections and infestations (68%), the similar results were found in many other studies like by Khalid A et al (63.2%), Thakare S et al (46.33%), Geet et al (69.4%), Rabia et al found (75.1%) and Balai (40.60%),[3,12,15,16] Mustafa et al recorded that out of 1860 patients 949 (51.02%) had infections and 388 (20.9 %) had infestations".[17]

In this study, "Bacterial infections were the most common (36.45%) followed by viral (15.78%), parasitic (7.99%) and fungal infections (7.79%), Geet et al also observed bacterial infections

(36.8%) most frequently followed by viral (17.4%), parasitic infections (10.2%) and fungal infections (5%) in their study,[12] Mustafa et al recorded 45.9% bacterial infections followed by viral (32.03%) and fungal (22.02%) infections,[17] however study by Javed showed fungal infections (15.7%) to be more frequent followed by bacterial infections (8.2%),[14] Rabia et al documented fungal infections (48.7%) to be most common followed by viral (33.5%) and then bacterial (17.7%),[3] These differences may be attributed to seasonal and climatic variations, pyoderma was the most common bacterial infection (35.29%) observed in this study population followed by impetigo (28.34%) and folliculitis (26.20%), Mustafa at al found impetigo (94%) to be the most frequent bacterial infection, Javed et al recorded impetigo (58%), furunculosis(26%), folliculitis(9%), ecthyma (7%) as the common bacterial infections in the descending pattern,[17] Balai observed impetigo (59.57%) most frequently occurring bacterial infection followed by pyoderma (26.39%),[9] Geet also found pyoderma (22.20%) as the most common dermatoses in their study group" (n= 500).[12]

Measles (38.27%) was widely spreading after varicella (30.8%), molluscum contagiosum (23.45%) in this study. Rabia et al observed warts (52.8%) as the frequently occurring viral infection followed by molluscum contagiosum (20.8%).[3]However Geet found Varicella (14.40) as the commonest viral infection .[12]

Tinea capitis (32.5%) mostly found fungal type disease as per the research results and after that tinea corporis (27.5%). This was comparable to the findings by Rabia et al which showed 64.9 % cases of tinea capitis followed by 24.7 % cases of tinea corporis.[3]

However Balai et al found 70.15% cases of tinea capitis followed by tinea facei (10.45%) and Tinea corporis (10.45%).[9]

Eczema constitutes 23.58 % patients in this study group. A "study by Geet et al showed dermatitis to be present in 30.6% cases and in the study by Jawade S et al, it was 20.6%", [12, 18] In this study among eczema group, the most common was sebborheic dermatitis(39.66%) followed by contact dermatitis (28.09%) , atopic dermatitis (16.52%) and pityriasais alba (15.70%). In comparison to the research by Rabia et al which showed sebborheic dermatitis (51.2%) most frequently followed by contact dermatitis (15.2%) and pityriasais alba (15.2%) each.[3]

Infestations comprised 7.99 % of the study group. Scabies was the most frequent (73.17%) followed by pediculosis (26.82%). However Mustafa et al found 388 cases of infestations out of total 1860 cases (20.9 %). Pediculosis (83.8%) was most frequently seen as compared to scabies (21.7 %).[17]

Huge variations in the "presentation of dermatoses has been seen in various studies, the variation among infective dermatoses can possibly be attributed to the geographic area, prevalent environmental factors, socioeconomic status, nutritional status, hygiene standards and medical resources available, the prevalence of certain dermatomes may be influenced by seasonal and climatic changes like atopic dermatitis and seborrhea dermatitis are more common in winters while papular urticaria is seen more frequently in rainy season, such type of seasonal variation could not be studied during the limited period of our study, though this study has highlighted the common patterns of dermatomes in pediatric age group but due to limited time period, the seasonal variations in the pattern of dermatomes could not be studied, this study can provide a preliminary baseline data for future epidemiological research, similar multicenter studies covering larger population and longer duration are required to better know the pattern", different types and impactful indicators for pediatric related dermatomes.

CONCLUSION

Particularly in children skin issues are one of the most affecting reasons behind morbidity. These all issues badly affect the life of the children with respect to have negative impact on physical development and natural growth of the children. This increasing trend of skin infestations and certain infections could be the reason of low education, inadequate nutrition's, poverty, unhygienic living, overcrowding, bad cleanness and low awareness about health tips. As a "clinical presentation of pediatric dermatomes differs from adult dermatomes, so it requires different approach in diagnosis and treatment, the special efforts should be made to reduce the incidence of skin infections by raising public awareness regarding sanitation, personal hygiene and nutrition of children". These all are preliminary actions are needed to avoid such skin issues among the children and their healthy life.

REFERENCES

1. Yasmeen N, Khan MR. Spectrum of common childhood skin diseases: a single centre experience. J Pak Med Assoc. 2005; 55:60-3.
2. Kacar SD, Ozuguz P, Polat S, Manav V, Bukulmez A, Karaca S. Epidemiology of pediatric skin diseases in the mid-western Anatolian region of Turkey. Arch Argent Pediatr. 2014; 112:421–7.
3. Rabia M, Nadia AA, Lamees MM, Muhammad J, Tariq R. Clinical spectrum of pediatric dermatoses at a tertiary care unit. J Pak Association Dermatol. 2018; 28:214-18.
4. Sharma S, Bassi R, Sodhi MK. Epidemiology of dermatoses in children and adolescents in Punjab, India. J Pak Association Dermatol. 2012; 22(3):224-9.
5. Jain N, Khandpur S. Pediatric dermatoses in India. Indian J Dermatol Venereol Leprol. 2010; 76:451-4.
6. Patel N, Barot J. Pediatric dermatoses encountered in the outpatient department of tertiary care centre. International Journal of Science and Research (IJSR). 2015; 4(3):178-81.
7. Fawzia Farag Mostafa, Aida Abdel Hamid Hassan. Prevalence of skin diseases among infants and children in Al Sharqia Governorate, Egypt. Egypt Dermatol Online J. 2012; 8(4):1-14.
8. Shrestha R, Shrestha D, Dhakal AK, Shakya A, Shah SC, Shakya H. Spectrum of pediatric dermatoses in tertiary care center in Nepal. Nepal Med Coll J. 2012; 14(2):146-8.
9. Balai M, Khare Ak, Gupta LK, Mittal A, Kuldeep CM, Pattern of pediatric dermatoses in a tertiary care centre of South-West Rajasthan. Indian J Dermatol.2012; 57:275-8.
10. Emodi IJ, Ikefuna AN, Uchendu U, U Duru A. Skin diseases among children attending the out-patient clinic of the University of Nigeria teaching hospital, Enug. Afr Health Sci. 2010; 10(4):362-6.
11. Ferreira FR, Nascimento LFC, Cirvidiu DC. Prevalence of pediatric dermatoses in a university hospital in southeastern Brazil. An Bras Dermatol. 2011; 86(3):477-82.
12. Geet Gunjana, Upadhyay N. A study of dermatoses in patients attending Pediatric OPD in a tertiary care hospital of Gandhinagar, Gujarat, India. Int J Contemp Pediatr 2017; 4:557-60.
13. Hadiuzzaman M, Hasibur MR, Nahida I, Islam MS, Sabrina AM, Bhuyan MKJ. Prevelance of dermatoses in rural pediatric population. Community Based Med J. 2013; 1:9-14.
14. Javed M, Jairamani C. Pediatric dermatology: an audit at Hamdard University Hospital, Karachi. J Pak Association Dermatol. 2006; 16:93-6.
15. Khalid A, Mehmood T. Spectrum of pediatric dermatoses and seasonal variation. J Islamic Intern Med Col. 2013; 8(3):78-82.
16. Thakare S, Singh A, Madnani A, Lakhar B. Scenario of pediatric dermatoses in rural population of central India. Global Journal of Dermatology and Venereology. 2013;1(1):7-10
17. Mostafa FF, Hassan AAD, Soliman MA, Nassar A, Deabes RH. Prevalence of skin diseases among children in AlShariqa Governate, Egypt. Egyptian online J Dermatol. 2012:8:1-14.
18. Jawade SA, Chugh VS, Gohil SK, Mistry AS, Umrigar DD. A clinico-etiological study of dermatoses in pediatric age group in tertiary health care center in South Gujarat region. Indian J Dermatol. 2015; 60(6):635.