

## **Pattern of infantile skin problems in a tertiary care hospital**

Rahat Bin Habib<sup>1</sup>, A. R. M. Luthful Kabir<sup>2</sup>, Md. Abdur Rouf<sup>3</sup>, Md. Kamrul Ahsan Khan<sup>4</sup>, Md. Faizur Rahman<sup>5</sup>, Md. Nazmul Hossain<sup>6</sup>, Md. Anisur Rahman<sup>7</sup>, Mohammad Rezaul Haque<sup>8</sup>, Muzibur Rahman<sup>9</sup>

### **ABSTRACT:**

**Introduction:** Skin diseases are a major health problem in children, which is associated with significant morbidity. Its prevalence ranges from 21% to 37% in various parts of Bangladesh in school-based study. The present study was conducted to know the prevalence and pattern of infantile skin problems. **Materials and Methods:** A cross-sectional descriptive study was conducted OPD in a tertiary care hospital in Dhaka between July 2014 to June 2015. A total of 212 children between 0 to 12 months were examined for diseases of the skin and socio-demography. Data were coded and analyzed through SPSS 26 version. **Results:** There were 75 female infants (35%) and 137 male infants (65%). Seborrheic dermatitis was more common problem and nearly half (47.5%) of all infants and remaining half was other six skin conditions. In case of gender variation both sexes suffered mostly from seborrheic dermatitis. However, more females (n=8) suffered from dermatophyte infection and impetigo than male (n=4). Total 11 types of occupations were identified. Among them most common (29%) was private service and business was the 2<sup>nd</sup> common father's occupation. Fathers living in abroad were 12%. Prevalence of seborrheic dermatitis was less (9%), whose parents were educated more than 12 years and prevalence was more (40.5%) who were educated less than 12 years ( $X^2-8.74$ ,  $df-2$ ,  $P-0.05$ ). **Conclusion:** Findings of present study indicates a shift in prevalence of skin diseases from infectious to noninfectious one. A multicenter study with large sample is required to investigate whether this trend is common in Bangladesh.

**Key words:** Pattern, Infants, Skin problems.

(The Insight 2020; 3(1): 33-37)

### **INTRODUCTION:**

Skin diseases are a major health problem in all age groups, especially in the pediatric age group. They

are associated with significant morbidity.<sup>1</sup> The prevalence of pediatric skin problem ranges from 4.3% to 49.1% in school-based surveys. Status of

1. Assistant Professor (Pediatrics), Sayed Nazrul Islam Medical College, Keshorgonj, Bangladesh. Professor of Pediatrics, Department of Pediatrics, Ad Din Medical Collage & Hospital, Dhaka.
2. Professor of Paediatrics, Department of Pediatrics, Sir Salimullah Medical College and Mitford Hospital, Dhaka.
3. Assistant Professor (Neonatology), Sheikh Sayera Khatun Medical Collage, Gopalganj.
4. Assistant Director, MCH-Services Unit, Directorate General of Family Planning, Dhaka.
5. Associate Professor, Department of Pediatrics, Institute of Child and Mother Helath (ICMH), Dhaka
6. Assistant Professor, Department of Pediatrics, SSMC and Mitford Hospital, Dhaka.
7. Associate Professor, Department of Paediatrics, Institute of Child and Mother Health (ICMH), Dhaka.
8. Associate Professor and in charge of Neonatology, Institute of Child and Mother Health (ICMH), Dhaka.

health, hygiene, and personal cleanliness of a society can be judged from the prevalence of certain skin diseases in the children of the community.<sup>2</sup>

Pediatric dermatoses vary in clinical features, treatment, and prognosis from adult dermatoses so that they have to be addressed in a different way. A variety of skin disorders are seen during childhood. The pattern of skin diseases varies from country to country with infections, infestations, and malnutrition, being more prevalent in developing countries, while scabies is more common in underdeveloped and eczema in developed countries. This can be attributed to differing climatic, cultural, and socioeconomic factors.<sup>3</sup>

School survey is a useful method to screen a large number of children of the particular age group for the presence of diseases at a time. The purpose of studying the prevalence of pediatric dermatoses is to assess the level of health awareness and availability of health-care services which is useful to build child health-care strategies that cope with actual community requirements.<sup>4</sup> Many studies which were conducted in urban areas do not reflect the true state of diseases in the community. Nearly 68% of Bangladeshi populations stay in rural areas and children below 14 years constitute about 42% of the total population.<sup>5</sup> Therefore, the present study was conducted to find the prevalence and pattern of skin diseases among infants in a tertiary care hospital in Dhaka.

Skin diseases and their complications have significant effect on children's quality of life. These problems range from cosmetic, such as dry skin, wrinkles, pigmentation to acute or chronic diseases which may be disfiguring but not always fatal. However, for children life-threatening conditions, if untreated may prove fatal (toxic epidermal necrolysis, pemphigus, malignant melanoma and cutaneous lymphoma).<sup>1</sup>

The pattern of skin diseases may vary from one country to another, as well as in rural and urban. Certain factors influence the pattern and frequency of presentation of various skin diseases e.g. genetics factors, nutritional and socio-economic status, personal habits.<sup>2-6</sup> Skin diseases being

common among the general population, account for a high percentage of all diseases dealt by physicians.<sup>7-9</sup>

Although skin diseases (especially infections and infestations) are a common health problem in developing countries like Bangladesh, they are not usually perceived to be a significant health concern. Numerous studies of prevalence and frequency of skin diseases have been done in all age groups. Similar sort of studies had also been conducted in different parts of our country. Current study has been carried out to determine the variability and prevalence of skin problems among infants in a tertiary care hospital in Dhaka, Bangladesh.

#### **METHODS AND MATERILS:**

This study was conducted in the pediatric department in the Institute of Child and Mother Health (ICMH), Dhaka from 1st July 2014 till 31<sup>st</sup> June 2015 over a period of 1 year on 212 infants. All the enrolled infants seek medical attention for different problems other than skin problem in the pediatric department over the year.

All the infants were subjected to an informed consent by their parents. A predesigned questionnaire and check list was used to gather information regarding parents' socio-economic status. After collecting detailed history, patients were subjected to comprehensive systemic examination. Clinical diagnosis was made on the basis of history and clinical examination. Laboratory investigations were performed where required. These included routine investigations like complete blood picture, urinalysis and X-ray chest. Biochemical profile was performed in selected cases. Other relevant investigations were done according to the requirement. Diseases were classified in different groups. All the findings were recorded, compiled, tabulated and analyzed by SPSS 26.

#### **RESULTS:**

A total of 212 children were included in the study. There were 75 females (35%) and 137 male infants (65%). The age range was from 0 days to 365 days of all infants.

**Table-1: Occupation of fathers**

Father's occupation	Number	Percent
Private service	61	29 %
Govt. service	12	5.5 %
Business	56	26.5 %
Driver	19	09 %
Abroad	26	12 %
Cultivator	13	06 %
Student	03	1.5 %
Teacher	05	02 %
Jamdani weaver	06	03 %
Rickshaw puller	04	02 %
Beggar	01	0.5 %
No job	01	0.5 %
Other	05	02 %
<b>Total</b>	<b>212</b>	<b>100%</b>

Total 11 types of occupations were identified. Among them most common (29%) was private service and business was the 2<sup>nd</sup> common father's occupation. Fathers living in abroad 12%.

**Table-2: Variation of skin diseases**

Disease on skin	Frequency of infants	Percent
1. Seborrheic dermatitis	101	47.5
2. Rash without fever	54	27
3. Measles	29	15
4. Dermatophyte	11	5.5
5. Impetigo	09	05
6. Varicella	07	04
7. Scabies	01	0.5
<b>Total</b>	<b>212</b>	<b>100%</b>

Seborrheic dermatitis was nearly half of all infants and remaining half were other six skin conditions.

**Table-3: Gender variation of skin diseases**

Disease on skin	Frequency (%) Male-137 (65%)	Frequency (%) Female-75 (35%)
1. Measles	29 (15)	00
2. Rash without fever	33 (16.5)	21 (10.5)
3. Varicella	05 (02)	02 (1.5)
4. Seborrheic dermatitis	57 (27)	44 (21)
5. Dermatophyte infection	03 (1.5)	08 (04)
6. Impetigo	03 (02)	04 (02)
7. Scabies	00	01 (0.5)

Both sexes suffered mostly from seborrheic dermatitis. However, more females suffered from dermatophyte infection and impetigo than male.

**Table-4: Parent's education and Seborrheic dermatitis**

	Seborrheic dermatitis		Total
	Absent	Present	
Parents education >12 years	23 (11%)	19 (09%)	42 (20%)
Parents education <12 years	84 (39.5%)	86 (40.5%)	170 (80%)
<b>Total</b>	<b>107 (50.5%)</b>	<b>105 (49.5%)</b>	<b>212 (100%)</b>

Prevalence of seborrheic dermatitis was less (19) whose parents were educated more than 12 years and prevalence was more (86) whose were educator less than 12 years.

$\chi^2$ -8.74, df-2, P-0.05

## DISCUSSION:

ICMH is a tertiary level hospital in Dhaka and it is a 250 bedded specialized hospital for children and mothers. Patients come from surrounding areas as well as different parts of the country.

Skin disease constitutes a substantial proportion of patients attending the hospital. Various factors are associated with skin disease. Lack of health education, poverty, illiteracy, poor hygiene and communal living are among the important contributory factors.<sup>10</sup>

For any disease, epidemiology offers one of the most powerful direct methods of evaluation. Very few epidemiological works have been done for infants in our country. In the current study, seborrheic dermatitis was the most frequent infantile skin problem. But in other studies, scabies has been reported to be the most common skin disease.<sup>11-17</sup> Therefore, our finding is at par with the studies mentioned. Devi and Zamzachin<sup>12</sup> have reported a frequency (9%), which is half as compared to that in the current study. Momen et al.<sup>18</sup> from India, reported the frequency of scabies to be as high as 45.5%. They claimed the shortage of water supply and poor hygiene as the cause of this high prevalence.

In the current study, infections had a frequency of 17%. The frequency of infections was reported to be equivalent in the study by Tameez-Ud-Din et al.<sup>11</sup> On the other hand past studies from Pakistan,<sup>11,14-17</sup> reported a higher frequency as compared to the current study. In our study there was only one female infant had suffered by scabies. Therefore, result of our study was dissimilar with the previous studies. On the contrary, Devi and Zamzachin<sup>12</sup> from India, has reported the frequency of infections to be as high as 33%. This discrepancy in turn could be due to a small sample size (212) of our study. Moreover, the frequency of different infections i.e. bacterial (10%), viral (2%) and fungal (3%) were less than that of which was reported in previous studies.<sup>11,14-17</sup> In this study rash in skin (27%) and fungal infection (5.5%) were 2<sup>nd</sup> and 3<sup>rd</sup> among the reported cases. In this study skin infections were less common, whereas seborrheic dermatitis was the commonest. This could be due

to improved personal hygiene, seasonal variation, knowledge about prevention and nutritional status. Difference in socioeconomic status may also contribute.

Zamanian et al.<sup>19</sup> from Iran and Agarwal et al.<sup>13</sup> from Saudi Arabia have reported the frequency of infections to be 8% and 27%, respectively. This difference could be explained by a difference in setting and design of the studies. Momen et al. from Hyderabad, reported the frequency of infections to be 42.5%.<sup>18</sup>

## CONCLUSION:

Findings of present study indicates a shift in prevalence of skin diseases from infectious to noninfectious one. A multi-centric study with bigger sample is required to investigate whether this trend is common in Bangladesh.

## REFERENCES:

1. Baruah MC. Prevalence of Dermatological Diseases in School Children in a urban area in Pondicherry. *Bangladesh J Dermatol Venereol Leprol.* 1988; 54: 300-2.
2. Kuldeep CM. Pattern of Pediatric Dermatoses in a Tertiary Care Centre of South West Rajasthan. *Bangladesh J Dermatol.* 2012; 57: 275-8.
3. Gupta CM. Pattern of Skin Diseases in Paediatric Age Group and Adolescents. *Indian J Dermatol Venereol Leprol.* 1998; 64:117-9.
4. El-Shiekh SE. Prevalences of Skin Diseases among Primary Schoolchildren in Damietta, Egypt. *Int J Dermatol.* 2014; 53: 609-16.
5. Bhatia V. Extent and Pattern of Paediatric Dermatoses in Rural Areas of Central India. *Bangladesh J Dermatology.* 1997; 63:22-5
6. Bedi MK. A Cross Section of Skin Diseases in Rural Allahabad. *Indian J Dermatol.* 2008; 53:179-81.
7. Bastuji GS. French People and Skin Diseases: Results of a Survey Using a Representative Sample. *Arch Dermatol.* 2003; 139:1614-19.
8. Van Weel C. Skin Diseases in Family Medicine: Prevalence and Health Care Use. *Ann Fam Med.* 2008; 6:349-54.

9. Kumar JB. Pattern of Pediatric Dermatoses in a Referral Center in South India. *Indian Pediatr.* 2004; 41:373-6.
10. Park K. Preventive medicine in obstetrics, pediatrics and geriatrics. In: Park K. *Park's Textbook of Preventive and Social Medicine.* 17<sup>th</sup> Ed. 2002: 359-411.
11. Tameez-Ud-Din, Butt AQ, Bangash FA, Abbas H. Burden of skin diseases at a tertiary care hospital. *J. Rawalpindi Med. Coll.* 2010; 14:90 - 2.
12. Devi T, Zamzachin G. Pattern of Skin Diseases in Imphal. *Indian J Dermatol.* 2006; 51:149-50.
13. Agarwal PK. Pattern of Skin Diseases in Al-Jauf region. *Ann Saudi Med.* 1997; 17:112-4
14. Haroon TS. Pattern of skin diseases in Karachi. *J Pak Med Assoc.* 1985; 35:73-8.
15. Shabbir G. Dermatoses prevalent in Lahore. *The Medicus.* 1961; 22:33-42.
16. Malik RA. Skin diseases in Bahawalpur. *J Pak Assoc Dermatol.* 2000; 10:3-8.
17. Malick K. An Audit of Dermatoses at Baqai Institute of Skin Diseases, Karachi. *J Pak Assoc Dermatol.* 2003; 13: 113-7.
18. Momen KN, Soomro RA, Ansari MS. Pattern of Skin Diseases in Patients Visiting a Tertiary Care Health Facility at Hyderabad, Pakistan. *J Ayyub Med Coll Abbottabad.* 2011; 23:37-9.
19. Zamanian A, Mahjub H. Prevalence of skin disease in Hamedan, Iran. In 2002. *Indian Journal Dermatol.* 2005; 50:208-11.