

ORIGINAL RESEARCH

Assessment of clinical features and risk factors of atopic dermatitis in children

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ABSTRACT

Background: Often known as atopic eczema, atopic dermatitis (AD) is a chronic or persistently relapsing eczematous skin condition that is characterized by itchy, dry, irritable, and readily irritated skin that is also accompanied by cutaneous functional impairment. The present study was conducted to evaluate clinical features and risk factors of atopic dermatitis. **Materials & Methods:** 48 children of ages of 1 to 15 years who were diagnosed with Atopic dermatitis of both genders were enrolled and the severity of the disease was assessed by the SCORAD index. **Results:** Age group 1-2 years had 10 males and 8 females, 2-5 years had 7 males and 5 females, 5-10 years had 5 males and 4 females and 10-15 years had 6 males and 3 females. Severity was mild in 25, moderate in 13 and severe in 10 patients. Clinical features were pruritus / itching in 48, dryness of the skin in 25, chronic relapsing eczema in 42, ichthyosis in 13 and recurrent conjunctivitis in 6 patients. The difference was significant ($P < 0.05$). There were 21 EBF and 27 mixed fed children. The mean SCORAD index score was 10.2 and 11.7 in mild, 32.5 and 39.2 in moderate and 71.8 and 86.4 in severe cases respectively. The difference was significant ($P < 0.05$). **Conclusion:** Bottle feeding during the first six months of life and infantile AD as the risk factors for moderate and severe AD.

Keywords: atopic dermatitis, Bottle feeding, SCORAD

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INTRODUCTION

Often known as atopic eczema, atopic dermatitis (AD) is a chronic or persistently relapsing eczematous skin condition that is characterized by itchy, dry, irritable, and readily irritated skin that is also accompanied by cutaneous functional impairment. The diagnosis of AD cannot be made using a laboratory "gold standard." AD is diagnosed based on a group of related indications and symptoms. It develops as a result of intricate interactions between many environmental, immunological, and genetic factors. Strong hereditary roots contribute to atopic dermatitis. The last 30 years have seen an increase in the prevalence of AD. Various factors have been identified as contributing to this shift, including modifications in environmental contaminants, shifts in breastfeeding practices, elevated consciousness, and urbanization. Phases of atopic dermatitis are threefold. The face, scalp, neck, and extensor surface of the extremities are the main areas affected during the infantile phase (up to 2 years of age) with erythematous, oozing papulo-vesiculous lesions. The lesions are subacute, more dispersed, and frequently localized in the flexor

folds of the neck, elbows, wrists, and knees during the childhood period (between the ages of 2 and 10). Lesions in the flexor regions are predominantly dry, lichenified, and hyperpigmented plaques during the teenage and adult stages (more than 10 years of age). The present study was conducted to evaluate clinical features and risk factors of atopic dermatitis.

MATERIALS & METHODS

The present study was conducted on 48 children of ages of 1 to 15 years who were diagnosed with Atopic dermatitis of both genders. All parents were informed regarding the study and their written consent was obtained.

Data such as name, age, gender etc. was recorded. A thorough clinical examination was done. Parameters such as height, weight, distribution of the lesion, severity of the skin lesion and the type of the skin lesion was recorded. The severity of the disease was assessed by the SCORAD index. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS**Table I Distribution of patients**

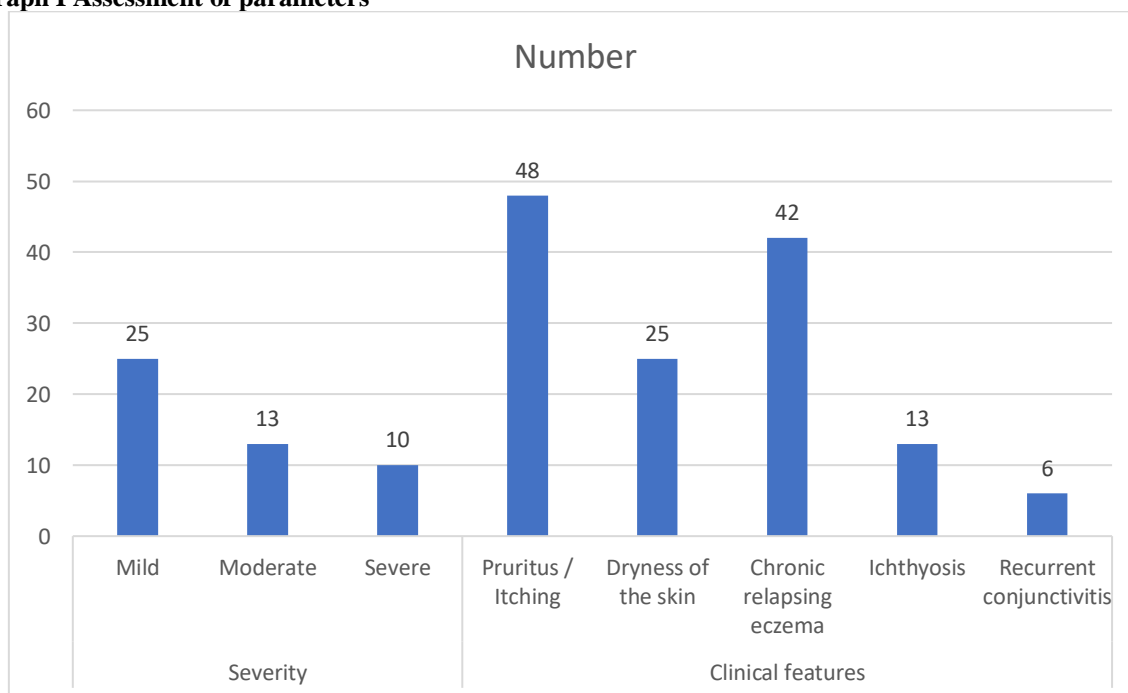
Age group	Males (28)	Females (20)
1-2 years	10	8
2-5 years	7	5
5-10 years	5	4
10-15 years	6	3

Table I shows that age group 1-2 years had 10 males and 8 females, 2-5 years had 7 males and 5 females, 5-10 years had 5 males and 4 females and 10-15 years had 6 males and 3 females.

Table II Assessment of parameters

Parameters	Variables	Number	P value
Severity	Mild	25	0.04
	Moderate	13	
	Severe	10	
Clinical features	Pruritus / Itching	48	0.82
	Dryness of the skin	25	
	Chronic relapsing eczema	42	
	Ichthyosis	13	
	Recurrent conjunctivitis	6	

Table II, graph I shows that severity was mild in 25, moderate in 13 and severe in 10 patients. Clinical features were pruritus / itching in 48, dryness of the skin in 25, chronic relapsing eczema in 42, ichthyosis in 13 and recurrent conjunctivitis in 6 patients. The difference was significant ($P < 0.05$).

Graph I Assessment of parameters**Table III SCORAD Index score**

	SCORAD Index		P value
	EBF children (21)	Mixed fed children (27)	
Mild	10.2	11.7	0.81
Moderate	32.5	39.2	0.03
Severe	71.8	86.4	0.01

Table III shows that there were 21 EBF and 27 mixed fed children. The mean SCORAD index score was 10.2 and 11.7 in mild, 32.5 and 39.2 in moderate and 71.8 and 86.4 in severe cases respectively. The difference was significant ($P < 0.05$).

DISCUSSION

Atopic dermatitis (AD), also known as atopic eczema, is a chronic inflammatory skin condition that is characterized by itchy, red, and dry skin. It is a common condition, especially in children, but can also affect adults. The hallmark symptom of AD is intense itching, which can be debilitating and disrupt daily life. AD often appears as patches of dry, red skin that may be rough or scaly. These patches can develop into areas of inflamed skin with a rash, which may ooze or crust over if scratched. People with AD often have sensitive skin that reacts to irritants or allergens, exacerbating symptoms. The present study was conducted to evaluate clinical features and risk factors of atopic dermatitis.

We found that age group 1-2 years had 10 males and 8 females, 2-5 years had 7 males and 5 females, 5-10 years had 5 males and 4 females and 10-15 years had 6 males and 3 females. Kumar et al found that out of a total of 1829 paediatric patients of the ages of zero months to 15 years with paediatric dermatoses, 132 (7.21 %) had atopic dermatitis. Of the 132 patients, 57 (43.2%) were boys and 75 (56.8%) were girls, with a male to female ratio of 1: 1.3. Among these, 29 were infants and 103 were children. Two (62.1%) patients belonged to rural areas, while 50 (37.9%) belonged to urban areas. A personal history, a family history (up to the third degree relatives) and both a personal and a family history of atopy were present in 43.18 %, 33.34 % and 12.1 % of the patients respectively. Forty (30.3 %) patients had been exclusively breast fed during the first six months of their lives. A majority (89.4 %) of the patients had the onset of the disease before they were five years of age. In infantile AD, the mean age \pm SD at onset was 5.2 ± 3.01 months. In the infantile group, 8 (27.6 %) patients had mild, 14 (48.3 %) had moderate and 7 (24.1 %) had severe atopic dermatitis. Infantile AD had a statistically significant higher SCORAD (SCORing Atopic Dermatitis) index score in all the three grade of severity of the disease. One hundred and three patients had childhood AD, out of which 40 (38.8 %) were boys and 63 (61.2 %) were girls, with a male to female ratio of 1: 1.57. In childhood AD, the mean age \pm SD at the onset of the disease was 3.47 years \pm 3.02. Sixty-three (61.1 %) patients belonged to the rural areas, while 40 (38.9 %) were from urban areas. In the first six months of their lives, 31 (30 %) children had been exclusive breast fed, 64 (62.23 %) had been mixed fed and 8 (7.77 %) had been exclusively bottle fed. One hundred and thirty (98 %) patients presented with itching. T

We found that severity was mild in 25, moderate in 13 and severe in 10 patients. Clinical features were pruritus / itching in 48, dryness of the skin in 25, chronic relapsing eczema in 42, ichthyosis in 13 and recurrent conjunctivitis in 6 patients. We found that there were 21 EBF and 27 mixed fed children. The mean SCORAD index score was 10.2 and 11.7 in mild, 32.5 and 39.2 in moderate and 71.8 and 86.4 in

severe cases respectively. Dhar et al in their study clinical patterns of atopic dermatitis (AD) were evaluated in 672 children. Of these, 210 were infants (up to 1 year) and 462 were children. Mean age at onset and mean duration of the disease were 4.2 months and 3.3 months, respectively, in the "infantile AD" group. In the "childhood AD" group the corresponding figures were 4.1 years and 1.9 years. In both groups, patients from urban areas significantly outnumbered those from rural backgrounds. In the infantile AD group, the disease was aggravated in winter in 67.14%, in summer in 23.36% and in spring in 9.51% of patients. The corresponding figures in the childhood AD group were 58% in winter, 32.92% in summer, 7.43% in spring, and 1.74% in the rainy season. In the infantile AD group, personal and family history of atopy were seen in 0.91% and 36.19% of patients, respectively. No patient had a history of drug allergy. In the childhood AD group, 15.35% had a personal history of atopy, 36.44% had a family history of atopy, and 7.36% had both a personal and family history of atopy. A history of drug allergy was reported in 3.16% of children. In the infantile AD group, 79% had facial involvement, 42% had flexors affected, and 5.70% had both flexors and extensors affected. The types of eczema seen were acute in 52.72%, subacute in 23.35%, chronic in 23.35%, and follicular in 0.46%. In the childhood AD group, 74.50% had facial involvement, 35.53% had flexural involvement, 56.32% had extensor involvement, and 8.24% had both flexors and extensors involved. Acute eczema was seen in 28.79%, subacute in 23.38%, chronic in 47.40%, and follicular in 0.43% of the children.

The shortcoming of the study is small sample size.

CONCLUSION

Authors found that bottle feeding during the first six months of life and infantile AD as the risk factors for moderate and severe AD.

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