

The Profile of Atopic Dermatitis in Out Patient Department of Dermatology Isra University Hospital

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ABSTRACT

Objective: To study the profile of atopic dermatitis in patients presenting at outpatient department of Dermatology of Isra University Hospital, Hyderabad.

Study Design: Observational study

Place and Duration of Study: This study was carried out at the Department of Dermatology, Isra University Hospital, Hyderabad from April 2012 to April 2014.

Materials and Methods: A sample of 100 patients of atopic dermatitis was selected through non probability purposive sampling as per inclusion and exclusion criteria. Atopic dermatitis was diagnosed on the basis of patient history and clinical presentation and clinical findings. The findings were collected on a predesigned structured proforma. Written informed consent was taken from the willing participants. Ethical approval was taken from the institute. Data was analyzed on SPSS 21.0 (IBM, incorporation, USA). Categorical variables were analyzed using chi square. P-value of statistical significance was taken at ≤ 0.05 .

Results: Age range was from 1 month to 12 years. 100 patients were diagnosed with atopic dermatitis out of 5000 patients with skin diseases over 2 years duration; this gives a prevalence of 2%. Onset before 10 years was noted in 60% of patients. 49% showed family history of atopy. 52% were having pure atopic dermatitis, of which 85% patients showed sub acute dermatitis at presentation. While 48% showed atopic dermatitis associated with allergic rhinitis, asthma, and or both. Bacterial infection was observed in 19%, viral infection in 17%, parasitic infection in 10% and fungal infection was noted in 3% of patients. Most patients were treated with a fairly simple regimen of moisturizers, topical steroids, and antibiotics for acute flares. Short courses of systemic steroids were used in 78 patients (78%).

Conclusions: The frequency of atopic dermatitis of present study is different to that reported in the Western literature, except for a significant and similar proportion of onset of atopic dermatitis and its clinical presentation.

Key Words: Atopic dermatitis, Allergic rhinitis, Atopic Asthma

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INTRODUCTION

Atopic eczema (AE), also known as eczema or atopic dermatitis, is a common, chronic, recurrent inflammatory skin disease characterized by distressing pruritus, signs of Inflammation and persistent dry skin. All body surfaces can be affected; however, the face and great flexures, such as neck, antecubital and popliteal folds, wrists as well as hands are among the most commonly involved.¹ The disease affects both genders and occurring primarily in infants and children and characterized by acute, sub acute and chronic lesions. In the acute phase, the affected areas present as erythematous papules and vesicles that become

sub acute phase, there are excoriations and erythematous scaling papules and plaques present.^{1,2} The prevalence of atopic dermatitis appears to have increased over the past three decades in Western countries, and current estimates suggest that 9±12% of children will suffer from atopic dermatitis.¹⁻³ Most of the studies on the epidemiology of atopic dermatitis are based on the Western population and there are few data in the Asian population, hence there is need to conduct studies in our local community. The present was conducted to describe the frequency and profile of atopic dermatitis patients presenting at the outpatient department of Dermatology, Isra University Hospital, Sindh

MATERIALS AND METHODS

A sample of 100 patients with atopic dermatitis attending the outpatient department of Dermatology of Isra University Hospital was selected. The criteria for the diagnosis of atopic dermatitis were based on history

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excoriated, exudative, and secondarily infected. In the

and clinical presentation of disease. Patients with family/personal history of atopy of any age were included, while patients with concomitant skin disorders were excluded. The following information was specially looked for: personal and family history of atopy, aggravating factors, morphology of the dermatitis, associated with other findings such as Molluscum contagiosum, eczema herpeticum, impetigo and Folliculitis. Complications relating to disease, laboratory finding, treatment, and outcome were also scrutinized. Any information that was missing was obtained where ever possible from the patients on next follow-up.

The findings were collected on a predesigned structured proforma. Written informed consent was taken from the willing participants. Ethical approval was taken from the ethical review committee of the institute.

Data was analyzed on SPSS 21.0 (IBM, incorporation, USA). Categorical variables were analyzed using chi square. P-value of statistical significance was taken at ≤ 0.05 .

RESULTS

One hundred patients were diagnosed with atopic dermatitis out of total 5000 patients with skin diseases attended the Isra University Hospital Hyderabad over 2 years duration; this gives a prevalence of 2%. Age range was noted as 1 month to 12 years (table 1). Of 100 patients, 51 were male children and 49 were female children, hence the male to female ratio was approximately less of 1:1. Of 100 patients, 37% patients revealed a family history of atopy. Atopic dermatitis was noted in 19%, allergic rhinitis in 13% and 5% gave a history of asthma (table 2). Atopic dermatitis categorized as pure and mixed was noted in 52% and 48% respectively. Of mixed atopic dermatitis, 23% revealed concomitant respiratory allergies, 23% allergic rhinitis, 12% atopic asthma and 13% proved of having concomitant asthma and allergic rhinitis (table 3). Sub acute atopic dermatitis was noted in most of patients i.e. 85%, while acute and chronic dermatides were noted in 4% and 11% respectively.

As regards the aggravating factors, cold weather, grass exposure, and thick woolen clothes were noted as most common. Table 4 shows the frequency of bacterial, viral, parasitic and fungal infections in 19%, 17%, 10% and 3% of patients respectively. Frequency of impetigo, Folliculitis, Molluscum contagiosum, dermatitis herpeticum, lice etc are shown in table 5.

Most patients were treated with a fairly simple regimen of moisturizers, topical steroids, and antibiotics for acute flares. Short courses of systemic steroids were used in 78 patients (78%). Topical antibiotics were prescribed in 18 patients: fusidic acid ointment was the most common followed by mupirocin ointment. Coal tar was used as soaps for scalp and body cleansing in 35 patients. 39 patients were prescribed systemic

antimicrobials. Systemic steroids were not used in any patients in present study. The duration of follow-up ranged from 1 month to 1 year.

Table No.1: Age categories of study population (n=100)

Age group (years)	No.	%
0–2	30	30%
3–10	45	45%
11– 12	25	25%

Table No.2: Family history of atopy in study population (n=100)

Family history	No.	%
Atopic dermatitis	19	19
Allergic rhinitis	13	13
Asthma	5	5
No family history of atopy	63	63

Table No.3: Rates of Atopic dermatitis and other concomitant allergies (n=100)

Personal history	No.	%
Atopic dermatitis	52	52
Respiratory allergies	48	48
Allergic rhinitis	23	23
Asthma	12	12
Asthma and allergic rhinitis	13	13

Table No.4: Frequency of various infections in study population (n=100)

Infections	No.	%
Bacterial Infection	19	19
Viral Infections	17	17
Fungal Infections	3	3
Parasitic Infections	10	10

Table No.5: Frequency of infective complications in study population (n=100)

	No.	%
Impetigo	11	11
Molluscum contagiosum	12	12
Head lice	8	8
Folliculitis	8	8
Viral warts	3	3
Tinea infection	3	3
Dermatitis Herpeticum	2	2
Scabies	2	2

DISCUSSION

Atopic dermatitis is also known as atopic eczema (AE) or eczema, is a chronic, recurrent and relapsing inflammatory skin disease characterized by distressing pruritus, signs of inflammation and persistent dry skin. All body surfaces can be affected; however, the face and great flexures, such as neck, antecubital and

popliteal folds, wrists as well as hands are among the most commonly involved. The disease affects both genders and starts mostly during infancy and childhood but is also prevalent in adults, personal or family history of atopy is common.^{2,15}

Since the 1950s, the mainstay of treatment for AE has been emollients for dry skin, avoidance measures, ultraviolet (UV) therapy and the use of topical corticosteroids (TCS) for acute eczema flares. It is a disease of infancy and childhood with 80±90% of cases occurring before the age of 7 years.^{3,16} the findings of present study are similar as we observed majority of patients (60%) had onset of the disease before the age of 10 years. The sex ratio was approximately less to 1:1 which is in keeping to previous studies.^{4,5} While other studies had reported a female preponderance (1.7:1),^{6,7,14} the findings are in contrast to present and previous studies.^{4,5}

The prevalence of atopic dermatitis in present study was 2%. The 2% prevalence is in contrast to studies reported from Western countries (11% and 16%).^{5,8} We are of opinion that the present study was based on hospital outpatient data, and it might be conceiving as the true prevalence may be higher in the community, as many cases of atopic dermatitis, especially the milder ones, had been treated by the general practitioners (GPs) and never reported.¹³

A hospital based study from Malaysia has reported prevalence of 3.7% which is also higher than present study.⁴ The reason is clear that most of patients of AE remain under diagnosed and are never-reported.

Atopic dermatitis categorized as pure and mixed was noted in 52% and 48% respectively. Of mixed atopic dermatitis, 23% revealed concomitant respiratory allergies, 23% allergic rhinitis, 12% atopic asthma and 13% proved of having concomitant asthma and allergic rhinitis (table 3). Sub acute atopic dermatitis was noted in most of patients i.e. 85%, while acute and chronic dermatides were noted in 4% and 11% respectively. The findings are highly consistent to a previous study reported by Diepgen and Fartasc.⁷ Allergic rhinitis appeared to be more commonly associated with atopic dermatitis than does asthma and the findings are in keeping to previous studies.^{3,7,9} In present study, the allergic rhinitis was 2 time more common than atopic asthma.

Both bacterial and viral skin infections are common in patients with atopic dermatitis. Staphylococcus aureus colonizes the skin in 90% of patients with atopic dermatitis.¹¹ Furthermore, the more severe the dermatitis, the higher the rate of colonization (100%).¹² Not only does this secondary bacterial infection produce weeping or crusted impetiginized plaques and pustules and this results in acute cases of the dermatitis. The present study concludes that a large number of

atopic dermatitis are present in community, hence true prevalence is missing.

CONCLUSION

The frequency of atopic dermatitis of present study is different to that reported in the Western literature, except for a significant and similar proportion of onset of atopic dermatitis and its clinical presentation. The present study concludes that a large number of atopic dermatitis may be existing which remains under diagnosed and moreover under reported, hence there is an urgent need to conduct further large scale community based studies to reach to true prevalence of the problem.

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Larsen FS, Hanin JM. Secular change in the occurrence of atopic dermatitis. *Acta Derm Venereol* (Stockh) 1992; Suppl. 176(7):12.
2. Katrine K, Clemmensen B, Thomsen SF, Ernst-Jemec GB, Agner T. Pattern of contact sensitization in patients with and without atopic dermatitis in a hospital-based clinical database. *J Contact Derm* 2014; 71 (2): 75–81.
3. Rajka G. *Essential Aspects of Atopic Dermatitis*. Berlin: Springer-Verlag, 1989.
4. Jaafar RB, Pettit JHS. Atopic eczema in a multiracial country (Malaysia). *Clin Exp Dermatol* 1993; 18: 469- 99.
5. Larsen FS, Diepgen T, Svensson A. The occurrence of atopic dermatitis in North Europe: an international questionnaire study. *J Am Acad Dermatol* 1996; 34: 760- 4.
6. Larsson PA, Liden S. Prevalence of skin diseases among adolescents 12±16 years of age. *Acta Derm Venereol* (Stockh) 1980; 60: 415- 23.
7. Diepgen TL, Fartash M. Recent epidemiological and genetic studies in atopic dermatitis. *Acta Derm Venereol* (Stockh) 1992; Suppl 176: 13- 8.
8. Berth-Jones J, George S, Graham-Brown RAC. Predictors of atopic dermatitis in Leicester children. *Br J Dermatol* 1997; 136: 498- 501.
9. Lammintausta K, Kalimo K, Raitala R, Forsten Y. Prognosis of atopic dermatitis. A prospective study in early adulthood. *Int J Dermatol* 1991; 30: 563- 8.
10. Mortz C G, Andersen KE, Dellgren C, Barington T, Bindslev-Jensen C. Atopic dermatitis from adolescence to adulthood in the TOACS cohort: prevalence, persistence and comorbidities. *J Allergy* 2015;70(7): 836–45.

11. Leyden JJ, Marples RR, Kligman AM. Staphylococcus aureus in the lesions of atopic dermatitis. Br J Dermatol 1974; 90: 525- 30.
12. Goh CL, Wong JS, Giam YC. Skin colonization of Staphylococcus aureus in atopic dermatitis patients seen at the National Skin Center, Singapore. Int J Dermatol 1997; 36: 653- 57.
13. de Bruin Weller M. S, Rockmann H, Knulst A. C, and Bruijnzeel-Koomen M. Evaluation of the adult patient with atopic dermatitis. Clin Exp Allergy 2013; 43 (3): 279–91.
14. Katsarou A, Armenaka MC. Atopic dermatitis in older patients: particular points. J Eur Acad Dermatol Venerol 2011; 25 (1): 12–8.
15. Cipriani F, Dondi A, Ricc G. Recent advances in epidemiology and prevention of atopic eczema. J Pediatr All Immunol 2014; 25 (7): 630–8.
16. Flohr C, Mann J. New insights into the epidemiology of childhood atopic dermatitis. J Allergy 2014; 69 (1): 3–16.