PATIENT AND CLINICAL PROFILE OF ATOPIC DERMATITIS IN SAUDI ARABIA

Ahmad Abdullah Alzaiyr, MBBS –
Resident, Dept. of Dermatology
Salih Hamad M. Aljabre, MBBS, MSc(Dermatology, PhD.
Associate Professor, Consultant Dermatologist.

Summary:
Atopic dermatitis is a common inflammatory skin disease. Its clinical pattern had been reported from different parts of the world. Formal documentation of atopic dermatitis in Saudi Arabia is lacking. We report our clinical study of atopic dermatitis in Saudi Patients.

Introduction:

Atopic dermatitis is a common inflammatory skin disease characterized by acute, subacute and chronic lesions. The diagnosis of atopic dermatitis is based on constellation of criteria compiled by Hannifin and Rajka[1].

Studies of atopic dermatitis had been reported from different regions of the world. From our area where atopic dermatitis is commonly encountered, formal reports are lacking. In the present paper, we report patient and clinical profile of atopic dermatitis in Saudi patients studied in a hospital setting.

Materials and methods:

Eighty new cases of atopic dermatitis seen in one year (1996) in King Fahad hospital of the university, which is a referral center, Alkhobar, Saudi Arabia, were reviewed. The patients were recruited from once/week clinic over a period of one year. Diagnosis of atopic dermatitis was based on the criteria proposed by Hannifin and Rajka [1]. All patients had thorough skin and systemic examinations. In addition to laboratory investigations required to rule out differential diagnoses, complete blood count and serum IgE level were performed. Skin swabs for bacteriological cultures and skin scrapings for potassium hydroxide microscopic examinations and fungal culture had been conducted where appropriate. Statistical analysis was carried out by Mann Whitney rank sum test and Chi Square where appropriate.

Results:

The total number of new patients seen was 1231. Patients of atopic dermatitis made 6.5%. There were 47 females and 33 males, F:M = 1.42:1. The age at presentation was from 2.5 months to 24 years (48.9±44.2 months). The age of onset (Table 1) ranged from 0.5 to 16 years with a mean of 1.6±2.4 years. The duration was from 0.5 month to 9.8 years (2.8±2.4 years).

Pure breast-feeding was maintained in 21 (26.3%) patients, 23 (28.8%) patients had bottle-feeding and 36 (45%) had both types of feeding. The age of onset was not affected by sex, breast or bottle-feeding, P values were 0.776, 0.217 respectively. Personal history of other atopic diseases; bronchial asthma, allergic rhinitis was positive in 36 (45%) patients. Positive family history of atopic diseases was present in 59 (73.8%) patients.

Pruritus was a universal feature. Worsening of the lesions occurred in 34 (42.5%) patients during winter and in nine (11.3%) patients during summer. Seventy-one (88.8%) patients had fluctuating course. The affected sites are shown in table 1. Acute eczematous lesions were present in 25 (31.3%) patients and 54 (67.5%) patients had lichenified in addition to eczematous lesions. One patient had exfoliative dermatitis. Minor clinical features are shown in table 2. Fifty-eight (72.5%) patients had secondary infected lesions. Staph. aureus was isolated from 42 patients, Beta haemolytic Streptococci from five patients and mixed Staph. aureus with proteus species from 11 patients. Twenty-five (31.3%) patients had viral lesions; 19 viral warts, 11 herpes simplex and five-molluscum contagiosum. Candidosis was diagnosed in four patients; two oral thrush, one paronychia and one diaper candidosis. .

Serum IgE level and eosinophil count have been determined in 60 patients. IgE level ranged from 5 to 4032 (429±745.2) international unit (iu). In 44 (73%) patients, IgE was more than 33 iu. Eosinophil absolute count ranged from zero – 1320 cell/ cubic millimeter (537±322). This count was equivalent to 0% to 15% (6.5±4.3%) of the total white cell count. In 36 (60%) patients, eosinophil count was more than 350-cell/ cubic millimeter i.e. more than 4% of the total white cell count.

Department of Dermatology
King Fahd Hospital of the University
King Faisal University
Al Khobar, Saudi Arabia

Table 1: Age of onset and affected sites

	2 – 3 M	4 - 12 M	13M - 4Y	5 - 8 Y	9 - 15 y	16 Y
No (%)	18	32	21	8	0	1
Face	16	26	8	0	0	0
U. Limb	7	22	9	0	0	0
L. Limb	8	22	6	0	0	1
Trunk	6	5	3	0	0	0
AF	2	0	3	8	0	0
PF	1	0	1	8	0	0
Hands	0	0	1	5	0	1
Feet	0	1	0	0	0	0

U. Limb = Upper limb L. Limb = Lower limb
AF = Antecubital fossa PF = Popletial fossa

Table 2: Minor clinical features

Clinical Feature	No. (%)
Xerosis	68 (85%)
Infraorbital folds	67 (84%)
Keratosis pilaris	64 (80%)
Periorbital darkening	57 (71%)
Perifollicular Accentuation	47 (59%)
Palmar hyperlinearity	42 (52%)
Ichthyosis	41 (51%)
Pityriasis alba	39 (49%)
Facial pallor	25 (31%)
Itch when sweating	21 (26%)
Cheilitis	10 (10.5%)
S B I	58 (73%)
Viral Infection	25 (31%)
Candidosis	4 (5%)

SBI = Secondary bacterial infection of lesions

DISCUSSION:

The present study shed light on atopic dermatitis in our part of the world. The occurrence of atopic dermatitis (6.5%) in the cohorts of the study was not low. Certainly, it does not indicate its prevalence in our area at large but to its importance as a cause of hospital referral. The onset of atopic dermatitis in our study was at an age range similar to the world-wide reported literatures with the majority of cases occurring within the first year of life [2]. Cases of adult onset [3] were absent and there wasn't an outstanding gender involvement but rather the sex ratio was approximate to the reported ratios [4, 5,6].

Positive personal history of other atopic diseases was within the reported range of 30-50% [7-9]. Other atopic diseases, however, may occur later in childhood [10]. Positive family history of atopic diseases was also in line with the reported figure [2]. Bottle-feeding was given to a large proportion of the patients but it did not affect the age of onset and its pathogenic rule in atopic dermatitis remains unclear [11]. Most of the patients suffered frequent flares of lesions and had long duration as known of atopic dermatitis.

Distribution of affected sites according to the age groups was identical to the documented pattern with the exception of hands and diaper areas. Hand involvement was not as common as regarded in children [12] and the diaper area in infants remained free of lesions. Lichenification was a common feature in our patients.

The most notable findings in our patients were xerosis and clinical signs related to it such as ichthyosis, keratosis pilaris, perifollicular accentuation and palmar hyperlinearity. The figure reported in the literature for ichthyosis in atopic dermatitis ranged from 2 – 37% [1,2,13]. Other prominent clinical features in our patients were the infraorbital (Dennie-Morgan) folds and periorbital darkening. Cheilitis was not a common feature in our patients as had been regarded [1, 12] and nipple eczema was absent. Pityriasis alba was not universals feature. In addition, exfoliative dermatitis was a rare complication.

Bacterial colonization of lesions was frequent as known in atopic dermatitis [14] but development of gross infections such as furuncles and cellulitis was not present. Viral infections were in line with reported findings [15-17]. Serum IgE level and eosinophil count were approximate to those mentioned in the literature [18,19].

To conclude, the most outstanding features in our group of patients were the minor criteria. It is not clear whether they were true manifestations of atopic dermatitis in our group of patients or ethnically common in our region because of lack of studies regarding their prevalence in our community.

References:

1. Hanifin JM, Rajka G. Diagnostic features of atopic dermatitis. Acta dermvener (stockh) 1980; Suppl 92: 44-47.

2. Rajka G. essential aspects of atopic dermatitis. Berlin:Springer-Verlag, 1989.

3. Tay YK, Hkoo BP, Goh CL. The profile of atopic dermatitis in a tertiary dermatology outpatient clinic in Singapore. Int J dermatol 1999; 38:689-692.

4. Jaafar RB, Petit JHS. Atopic dermatitis in a multiracial country (Malaysia). Clin Exp Dermatol 1993; 18: 469-499.

5. Larsen FS, diepgen T, Svensson A. the occurrence of atopic dermatitis in north Europe: an international questionnaire study. J Am Acad Dermatol 1996; 34:760-764.

6. Larsson PA, Liden S. Prevalence of skin diseases among adolescent 12-16 years of age. Acta Derm Venereol (Stockh) 1980; 60:415423.

7. Pastermak B. the prediction of asthma in infantile eczema: a statistical approach. J Pediatr 1965; 66:164-165.

8. Rajka G. Prurigo Besnier (atopic dermatitis) with special reference to the rule of allergic factors I. The influence of atopic heredity factors. Acta derm Venereol (Stockh) 1960; 40:285-306.

9. Dipegen TL, Fartash M. recent epidemiological and genetic studies in atopic dermatitis. Acta Derm venereol (Stockh) 1992; Suppl. 176:13-18.

10. Kissling S, Wuthrich B. Follow-up of atopic dermatitis after early childhood. Hautarzt 1993; 44:569-573.

11. Kay J, Gawkrodger DJ, Mortimer. The prevalence of childhood atopic dermatitis in a general population. J Am Acad Dermatol 1994; 30:35-39.

12. Holden CA, Parish WE. Atopic dermatitis. In Champion RH, Burton JL, Burns DA etal (eds) Rook, ΩWilkinson and Ebling Textbook of Dermatology, Blackwell science ltd:Oxford, 1998, vol 1, Chap 18, pp 681.

13. Uehara M, Hayashi S. Hyperlinear palms. Association with ichthyosis and atopic dermatitis. Arch Dermatol 1981; 117:490-491.

14. Hanifin J, Homburger HA. Staphylococcal colonization, infection and atopic dermatitis-association not etiology. J Allergy Clin Immmmunol 1986; 78:563-566.

15. Svejgaard E, Faergeman J, Jemec J et al. Recent investigations on the relationship between fungal skin diseases and atopic dermatitis. Acta Derm Venereol (Stockh) Suppl 1989; 144:140.

16. Ry and present atopic dermatitis. Br J dermatol 1986; 114:575-582.stedt I, Stranegard IL, Stranegard O. Recurrent viral infections in patients with past

17. Currie JM, Wright RC, Miller OG. The frequency of warts in atopic patients. Cutis 1971; 8:243-245.

18. Jones HE, Inouy JC, McGerity JL. Et al. Atopic disease and serum immunoglobulin E. Br J Dermatol 1975; 92:17-25.

19. Kapp A. the role of eosinophils in the pathogenesis of atopic dermatitis-eosinophil granule protein as markers of disease activity in atopic dermatitis. Allergy 1993; 48:1-5.