THE PATTERN OF ENDOGENOUS ECZEMA IN THE NORTHERN FRONTIER, KINGDOM OF SAUDI ARABIA

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This study describes the clinical pattern of endogenous eczema in 1224 cases seen in the skin clinic of Arar Central Hospital during a three year period from January 1991 to December 1993. A total of 75.5% of the patients were Saudis. Atopic eczema was the most common type of endogenous eczema seen, occurring in 41.8% of patients. A total of 63.2% of the patients with atopic eczema were below two years of age. The male to female ratio was about 1.1:1 Nummular eczema was seen in 25.7% of cases with a male predominance of 2:1 and a peak age of occurrence in the fourth decade. Seborrheic eczema occurred in 18% of patients with a male to female ratio of 1:2.5. Lichen simplex was seen in 3.4% of cases, pityriasis alba 2.2%, pompholyx 2% and gravitational eczema in 0.6%. The lesions were unclassified in 6.2% of cases. Compared to studies in Europe and North America, there was a relative paucity of cases of gravitational eczema and seborrheic eczema was far more common in females; otherwise, the pattern is similar.

Endogenous (constitutional) eczema is an inflammatory response of the skin to multiple endogenous agents, characterized histologically by intercellular edema (spongiosis) of the epidermis. Often, however, the cause is unknown.[1] Classification remains difficult and unsatisfactory. Some terms are based on the appearance of the lesions, e.g. nummular or discoid, while others reflect outmoded or unproven theories of causation, e.g. seborrheic eczema. A convenient working classification, based on the pattern of distribution or etiological factors into the following subtypes of atopic, seborrheic, nummular, pompholyx, pityriasis alba and gravitational (stasis) eczema is generally acceptable.

Endogenous eczema is a common cause of consultation in the skin clinic of Arar Central Hospital, forming about 20% of new dermatological consultations. There are several reports which suggest the prevalence and pattern of endogenous eczema differ in different geographical locations.[2,3] The present study of 1224 cases (the first in this region, as far as we are aware) attempts to present the pattern of endogenous eczema as seen in the Northern Frontier of the Kingdom of Saudi Arabia and to compare it with studies in other parts of the world.

Patients and Methods

Patients seen in the skin clinic of Arar Central Hospital with a diagnosis of endogenous eczema over a three year period (January 1991 to December 1993) form the basis of the study. Arar Central Hospital is a referral center serving a population of over 100,000 residents in Arar and its environs.

The records of patients were studied with reference to the history and findings on clinical examination. Diagnosis was mainly clinical but skin scrapings were examined to exclude fungal infection in doubtful cases. A total of 75.5% of the patients were Saudis; the others were from other Arab countries, the Indian subcontinent and the Philippines.

Results

Table 1 shows the distribution of various types of endogenous eczema among various age groups. There was a total of 1224 patients. Atopic eczema was seen in 41.8% of cases. The figures for the other types of endogenous eczema were nummular 25.7%, pompholyx 2% and gravitational eczema in 0.15%. The unclassified cases formed 6.2% of the total numbers.

Table 2 shows the distribution of patients with endogenous eczema according to the types and sex. Atopic eczema, nummular eczema, lichen simplex and pompholyx were more common in male patients while seborrheic eczema, pityriasis alba and gravitational eczema were more common in females.

Discussion

This study was undertaken with the specific aim of determining the pattern of endogenous eczema in the Northern Frontier and examining the features of each type of endogenous eczema and comparing the findings with that of other studies elsewhere. No attempt was made to ascertain the incidence or prevalence of endogenous

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TABLE 1. *Distribution of various tyoes of endogenous eczema among various age groups.*

Type	Age (years)							
	0-9	10-19	20-29	30-39	40-49	50-59	60++	Total (%)
Atopic	364	84	38	17	7	2	0	512 (41.8)
Nummular	42	63	60	103	36	8	3	315 (25.7)
Seborrheic	54	28	35	62	26	12	3	220 (18)
Lichen simplex	0	1	2	5	16	14	4	42 (3.4)
Pityriasis alba	8	15	4	0	0	0	0	27 (2.2)
Pompholyx	1	3	4	9	5	2	0	24 (2.0)
Gravitational	0	0	0	2	3	2	1	8 (0.15)
Unclassified	8	10	26	18	10	3	1	76 (6.2)

TABLE 2. *Distribution of endogenous eczema according to the types and sex.*

Type	Male	Female	Male:Female ratio	Total No.
Atopic	268	244	1:1.1	512
Nummular	208	107	2:1	315
Seborrheic	63	157	1:2.5	220
Lichen simplex	23	19	1.2:1	42
Pityriasis alba	13	14	1:1.1	27
Pompholyx	14	10	1.4:1	24
Gravitational	2	6	1:3	8
Unclassified	41	35	—	76
Total	632	592	1.1:1	1224

eczema, which hopefully will be the subject of a future cooperative study.

Atopic eczema was the most common type of endogenous eczema seen in our patients. A family history of atopy (asthma, allergic rhinitis and atopic eczema) was elicited in about 35% of patients. Atopic eczema was characterized by persistent pruritis, facial and extensor involvement in infants, flexural lichenification in adults and a general tendency towards chronicity. More than 50% of our patients were infants.

In this study, the first symptoms in many infants began between the ages of eight to 12 weeks, a little later than the six to eight weeks found in studies in Europe.[4] The lesions tend to be papulovesicular with oozing and crusting; the face, scalp and extensor aspects of the body were commonly affected with occasional involvement of the trunk, thighs, buttocks and genital region. The most common complication encountered was secondary bacteria infection due to *Staphylococcus aureus*, seen in 18% of cases. No infant with atopic eczema had eczema herpeticum or vaccinatum (from infection with herpes simplex and vaccinia infection respectively) during the period of study.

Atopic eczema in our adolescent and adult patients was characterized by thickening, lichenification with erythema and scaling affecting the flexures, neck, face and chest. The scalp was often affected. The incidence of hand eczema in our patients with atopic eczema was about 12%, similar to the findings in a study in Europe.[4] The course of atopic eczema in this study was found to be variable. In a majority of infants, the eruption continues with periods of remissions and exacerbations, with a tendency towards complete remission as the infants get older. In a few patients, the eruption is mild enough to respond completely to common household remedies. In older children and adults, there was always some residual xerosis. The relative rarity of atopic eczema above sixty years in this study might suggest a complete remission with time. This pattern is similar to the findings in other studies.[4,5]

Nummular eczema (discoid eczema) occurred in 25.7% of cases seen in this study. Distribution among the various age groups was generalized, though it was rarely seen in infants. The peak age of occurrence was in the fourth decade, males being more affected than females (ratio 2:1). Less than 10% of patients had a family history of atopy, similar to the findings of Cowan[6] in his analysis of 325 cases. Clinically, the lesions consist of minute exudative vesicles occurring in discoid plaques on the extensor surfaces of the extremities. Commonly affected sites include the dorsal surfaces of the hands and fingers, extensor areas of the legs, dorsal feet and less often the face and the trunk. The eruption commonly cleared after treatment with topical steroids, though recurrence was frequent.

Seborrheic eczema was seen in 18% of our patients with endogenous eczema. There were two peak ages of occurrence — in infants (below one year) and in the fourth decade. Females were more often affected than males (ratio 2.5:1), which is different from the findings in some other studies in Europe,[7] where males were more affected. This may be partly related to the fact that the most common form of seborrheic dermatitis in our series was associated with dandruff (pityriasis capitis) and women tend to be more conscious than men of diseases affecting the scalp. Infants commonly present with adherent, waxy scaling of the vertex with erythematous eruption on the face, eyebrows, ears and sometimes intertriginous lesions of the armpits, umbilicus and groin. In adults, most patients present with excessive dandruff. In addition, there may be dry scaly petaloid lesions of the presternal and interscapular

areas. Intertriginous lesions of the armpits and groin were also seen. In all cases, pruritis was mild and lichenification rare. Complications encountered in infants include secondary candida infection and otitis externa. In adults, blepharitis was seen in a few patients. A case of severe exfoliative dermatitis (Leiner disease)[8] was seen in a male patient (foreign resident). There was good response of the associated dandruff to shampoo containing salicylic acid and tar. The few unresponsive cases were controlled with ketoconazole shampoo. The cutaneous eruptions were successfully managed with topical steroids, although there were occasional exacerbations.

Lichen simplex or localized neurodermatitis was seen in 3.4% of patients. Most of the patients were above thirty years; both sexes were affected, with a male to female ratio of 1.2:1. The lesions were itchy plaques as in the original description by Brocq.[9] Common sites were the neck, forearms and legs. The lesions responded to potent topical steroids but recurred often when treatment was stopped.

Pityriasis alba is characterized by asymptomatic superficial hypopigmented scaly patches on the face, upper trunk and proximal extremities. It was mainly seen in children and young adults. O'Farrell[10] considers the process as eczematization of multiple etiologies with postinflammatory hypopigmentation. Most patients responded to mild topical steroids without residual changes. Pompholyx is characterized by recurrent bouts of vesicles or large blisters appearing on the palms, fingers and the soles of adults. It occurred in most age groups and responded to treatment with potent topical steroids. Gravitational (stasis) eczema was seen more often in females with varicose veins. Presentation was usually as a chronic patchy eczematous condition of the lower legs and excoriation which may lead to ulcer formation. Treatment of the associated varicose edema and application of mild topical steroids was effective in most patients.

It was difficult to classify 6.2% of the patients with endogenous eczema because their lesions did not fit into any of the outlined patterns. Most prominent among these patients were those with fissures on the soles (feet eczema) without the other features of atopic eczema. The condition was seen in most age groups.

In conclusion, we hope this study will encourage further work by investigators in other provinces to give a balanced view of the pattern of endogenous eczema in the Kingdom.

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