

## STUDY ON SOME FACTORS ASSOCIATED WITH ECZEMA IN RAMADI.

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### Abstract:

Eighty eczematous patients were included in this study from both sexes and two age groups, adults were (52) patients aged (18-70) years and children were (28) included aged (3-17) years. They were attending Department of Dermatology in Ramadi General Hospital Ramadi, Al-Anbar Governorate West of Iraq, during the period extended from April2005-March 2006. Patients were submitted to a clinical examination and questionnaire test. Data were analyzed using Chi - square and T test.

Results showed that females within age group (3-17) years showed higher rate of eczema than males. Adult males showed higher of eczema , (18: 80 ) patients were showing familial link, adult females were more allergic to variety of food. Out of the total studied patients (61.25%) showed seasonal eczema while 38.75% of them showed eczema at any season.

*Keywords :Eczema, Allergic dermatitis , Atopic dermatitis.*

### Introduction

Eczema is an acute or chronic non contagious skin disease characterized by redness, itching, blisters ,crusting and scaling (1,2,3,4,). Eczema has global distribution of all races, all age groups and both sexes(4,5,6,7). Regarding the causative triggering factors, Eczema may be due to endogenous or exogenous factors or both (4,5,6,8,9).Infections of different etiology were found to play a role in eczema and other allergic disorders, Incitation and propagation (10,11,12,13,14,15). Parents who suffer from allergic disorder including eczema have higher risk of having children with eczema (16 ). The most frequently studied

chromosomal regions that may harbor atopy susceptibility genes are on chromosomes 5q, 6q, 11q, 14q and 17q (17 , 18). Most common type of food allergy is Type -1 hypersensitivity, patients who have food allergy can have IgE antibody beside IgG and IgM (19 ). Many external factors may be primary irritant substances such as acids, alkalis, dyes and other chemicals (5,20,21). Food was also blamed to induce or reduce allergic conditions like eczema , asthma, and allergic rhinitis(22 , 23, 24 ).

Breast milk believed to have certain factors which can seal the infant gut mucosa, this reduce antigen access to the circulation (22). Regarding sex, some female patients

have felt atopic dermatitis symptoms may worsen before or during menstruation (25).

No previous study in Ramadi city was done to show the effect of such factors on eczema , so this study was devoted.

#### **Patients and methods**

Eighty patients with eczema were attending the Clinic of Dermatology and Veneriology in Ramadi General Hospital, Al-Anbar Governorate West of Iraq During thee period extended from April 2005 to March 2006 .

Patients were from both sexes and their ages were from (3-70) years, they were included within two age groups, children within (3-17) years age group and adults within the age group (18-70)years. They examined by dermatologist, depending on their clinical picture, questionnaire test was done for each patient directly.

#### **Statistical Analysis**

Data was analyzed using Chi-Square test to know the difference between observed values, T test was used also to compare between the mean values. Statistical analysis was done by using SPSS Ver 10 program (25).

#### **Results**

##### **Age and sex:**

Females within age group (3-17) years showed higher rate of eczema than that of males. While males within age group(18-70) years showed higher rate of affection than females ( $P < 0.05$ ) (Table-1).

##### **Distribution of Eczematous Lesions According to the Site, Age and Sex**

Eczematous lesions were distributed in different regions of patients body, the highest number of eczematous lesions were seen on the upper limbs (Arm and Hand) (39) followed by lesions number (27) on the lower limbs (Leg and Foot) and

(12) patients showed lesions on head ( Neck and Face) regions ( Table-2).

While two(2) patients only were showing eczematous lesions on the abdominal region. Patients were not showing any lesion on the chest. Eczematous lesion number in patients within age group (18-70) years were more than that of age groups(3-17) years in the upper limbs, lower limbs and head regions. Patients within age group (3-17) years were showing two (2) lesions on the abdomen While lesions were not seen on the abdominal region of those within age group (18-70) years (Table-2).

##### **Familial Factor**

(18.7%) of child females and (16.6%) of child males were showing familial history of eczema, while adult males and females showed nearly similar ratios, (15.1% ) and (15.7 %) respectively. Regarding this factor, no significant difference ( $P > 0.05$  ) was found between sexes in both age groups ( Table-3).

##### **Food factor**

Adult females were more allergic to a variety of food and showed higher rate (36.8 %) than that of adult males (21.2 %) ( $P < 0.05$ ) ( Table-3).

##### **Seasonal factor**

Out of total patients (61.25 %) showed seasonal eczema, while ( 38.78 % ) of them showed eczema at any season of the year. Children showed eczema in spring and summer (21.4 %) and (14.2 %) respectively, while adults showed eczema in summer (32.6 %) and spring ( 25% ) (Table - 3) (Figure-1).

#### **Discussion**

##### **1. Age and Sex Factors**

The rate and severity of eczema were found to be high in females in age group (3-17) years and adult males. This was in accordance with that of other workers (5, 27, 28, 29).

Adult males showed higher rate of eczema than that of females ( 30 ) , this might be due to the fact that males are more affected by sensitive factors through different jobs and occupations (5,31). Sex hormones were blamed also to modulate immune system toward atopy ( 32 ).

## **2. Distribution of Eczematous Lesions According the Site, Age and Sex**

Patients who showed highest number of eczema tic lesions on the upper limb (Arm and Head) was attributed to the more contact of such regions to the allergens, this was consistent with the findings of (4, 5, 6, 33).

Patients who showed eczematous lesions on the lower limbs (Leg And Foot) might be due to exposure to an irritant materials, shoe materials or medicine, this was in acceptance with that of (4, 5, 6, 33). Patients who showed eczematous lesions on the head ( Neck and Face ) may be due to certain chemicals (Hair dyes), plants and light sensitive penicillin and more localized forms of cosmetics and this was in agreement with (4, 5, 33).

Age and sex related variations in the lesions on body sites were attributed to many factors, like individual behavior and habits, clothing as well as occupation (6 ,32).

## **3. Familial Factor**

Familial factor showed importance in this study as shown in (Table-3), results obtained were in agreement with (8, 33, 34, 35). Familial factors provides an evidence for the hereditary bases of eczema.

## **4. Food Factor**

Food seemed an important contributory factor in eczema in both sexes and both age groups especially in certain foods such as milk , eggs, milk, peanuts, seafood, wheat and Soya. This was consistent with what

was mentioned by (36, 37, 38). Also nationally occurring chemicals such as salicylate in many herbs, fruits, and vegetables, tyramine in aged meat and vegetables and wine. Purines in protein foods play a role in the exacerbation of atopic eczema . This was in accordance with (39, 40).

## **5. Seasonal Factor**

Seasonal variation in eczema may be arised from the difference in the climatic factors and other provoking agents (Plant pollens, Animal agents and photosensitization) during a season (4, 21, 41, 42). Increased ratio of eczema patients in Spring and Summer in both age groups was in accordance with (5). This might be due to increased provoking factors, such as pollens, greases and increasing temperature and continuous cutting off the electrical current. Winter increased ratio in children could be due to environmental factors and children were more sensitive to these factors more than adults and this ratio decreased with age progress (33).

We can conclude that there are many factors showed importance in eczema in Ramadi city via their association directly or indirectly such as familial, food, age, sex as well as seasonal factors. So these factors must be regarded during manipulation and prevention of eczema. We Recommend further studies for more population with more accurate Laboratory and clinical manifestations at the same area .

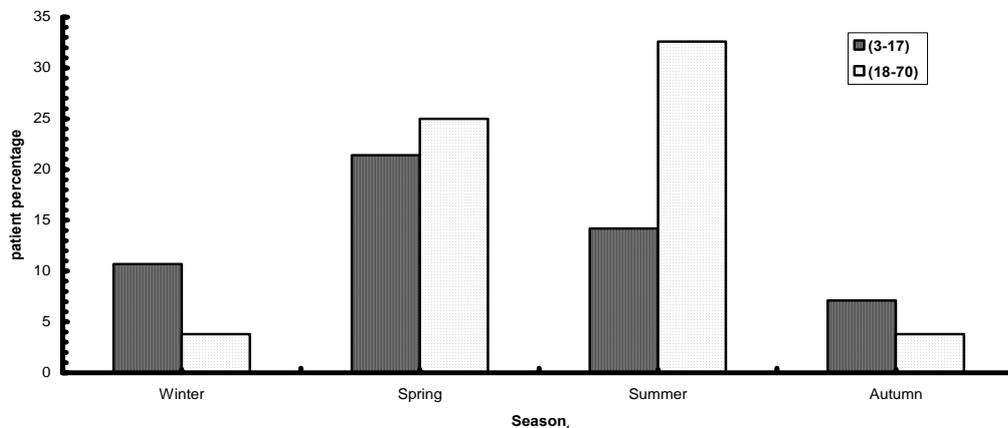
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(Figure-1) Seasonal distribution of eczema in different age groups .

**(Table-1) Age and Sex distribution of the studied samples (80 Patients )**

Age group (Years)	Male	Female	Total
(3-17)	12:80 (15.0 %)	16:80 ( 20.0 % )	28:80 (35 %)
(18-70)	33:80 (41.25 %)	19:80 ( 23.75%)	52:80 ( 65 %)
<b>Total</b>	<b>45:80</b> <b>(56.25 %)</b>	<b>35:80</b> <b>(43.75%)</b>	<b>80:80</b> <b>( 100 %)</b>

**(Table-2) Distribution of Eczematous Lesions According to the Site, Age, and Sex in Patients**

Site of Eczema	Age group (3-17) years		Age group (18-70) years		Total
	M	F	M	F	
<b>Head (Neck and Face)</b>	<b>3:12</b> <b>(25.0 %)</b>	<b>0:16</b> <b>(0 %)</b>	<b>7:33</b> <b>(21.2 %)</b>	<b>2:19</b> <b>(10.5 %)</b>	<b>12:80</b> <b>(15.0 %)</b>
<b>Chest</b>	<b>0:12</b> <b>(0 %)</b>	<b>0:16</b> <b>(0 %)</b>	<b>0:33</b> <b>(0 %)</b>	<b>0:19</b> <b>(0 %)</b>	<b>0:80</b> <b>(0 %)</b>
<b>Abdomen</b>	<b>1:12</b> <b>(8.3 %)</b>	<b>1:16</b> <b>(6.2 %)</b>	<b>0: 33</b> <b>(0 %)</b>	<b>0:19</b> <b>(0 %)</b>	<b>2:80</b> <b>( 2.5 %)</b>
<b>Upper Limbs ( Arm and hand)</b>	<b>4:12</b> <b>( 33.3 % )</b>	<b>9:16</b> <b>( 56.2 % )</b>	<b>15:33</b> <b>(45.4 %)</b>	<b>11:19</b> <b>( 57.8%)</b>	<b>39:80</b> <b>(48.75 %)</b>
<b>Lower Limbs (Leg and Foot)</b>	<b>4:12</b> <b>(33.3 %)</b>	<b>6:16</b> <b>(37.5 %)</b>	<b>11:33</b> <b>( 33.3 %)</b>	<b>6:19</b> <b>(31.5 %)</b>	<b>27:80</b> <b>(33.75 %)</b>

**(Table-3) Effect of some factors on eczema**

Food		Season (%)								Familial Factor (%)		Age groups
		Autumn		Summer		Spring		Winter				
F	M	F	M	F	M	F	M	F	M	F	M	
2:16 (12.5)	4:12 (33.3)	1 : 16 (6.25)	1:12 (8.3)	4:16 (25)	0:12 (0)	4:16 (25)	2:12 (16.6)	2:16 (12.5)	1:12 (8.3)	3:16 (18.7)	2:12 (16.6)	(3-7) years
7:19 (36.8)	7:33 (21.2)	0 : 19 (0)	2:33 (6.06)	8:19 (42.1)	9:33 (27.2)	6:19 (31.5)	7:33 (21.2)	0:19 (0)	2:33 (6.06)	3:19 (15.7)	5:33 (15.1)	(18-70) years
9:35 (25.7)	11:45 (24.4)	1:35 (2.8)	3:45 (6.6)	12:35 (34.2)	9:45 (20)	10:35 (28.5)	9:45 (20)	2:35 (5.7)	3:45 (6.6)	6:35 (17.1)	7:45 (15.5)	Total

