



## ECZEMA; FREQUENCY OF DIFFERENT TYPES IN A TERTIARY CARE HOSPITAL

Dr. Humaira Maryum Agha<sup>1</sup>, Dr. Sadaf Ahmed Asim<sup>2</sup>, Dr. M. Zafar Alam<sup>3</sup>, Prof. Zarnaz Wahid<sup>4</sup>

1. FCPS (Derma), Assistant Professor, Dept of Dermatology, Hamdard college of Medicine and Dentistry.
2. FCPS (Derma), Diplomate (RCPSG), Assistant Professor, Dept of Dermatology DIMC, DUHS.
3. Assistant Professor, Hamdard College of Medicine & Dentistry
4. Professor of Dermatology, DUHS.

**Correspondence Address:**  
Dr. Humaira Maryum Agha.  
Department of Dermatology,  
Hamdard University Hospital,  
Taj Medical Complex,  
M.A. Jinnah Road, Karachi.  
humairamaryum@yahoo.com

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**ABSTRACT... Objectives:** To determine the frequency of different types of eczema in patients presenting in a tertiary care hospital. **Study Design:** Cross sectional descriptive type of study. **Setting:** Hamdard University Hospital Karachi. **Period:** January 2013 till December 2013. **Patients and Methods:** All new cases of any type of eczema were registered by non-probability convenient sampling. Total 192 patients of both genders and all ages were enrolled after taking informed consent. Diagnosis was made on detailed history and clinical examination by consultant dermatologist. All specific and relevant investigations were done according to requirement. Patients were divided in two groups, exogenous eczema and endogenous eczema, for convenience. Data was analyzed by the latest version of SPSS. **Results:** There were 192 patients, out of which 52.08% were males and 47.91% females. Out of the total presented patients 50% had endogenous eczema, 43.37% had exogenous eczema and 25.62% had unspecified eczema. In endogenous group 11.45% had hand dermatitis followed by seborrhoeic dermatitis, atopic dermatitis and asteatotic eczema in descending frequency of presentation. Pityriasis alba, discoid eczema and pompholyx were seen less frequent. In exogenous eczema allergic contact dermatitis was seen in 14.06% patients, while irritant contact dermatitis in 11.45% patients. Infective eczema and photo-allergic eczema were seen in small number of patients. **Conclusion:** It was found in this study that allergic contact dermatitis was most common type of eczema followed by other types. Whatever the type is, eczema can be treated, symptoms can be relieved and recurrences can be prevented by appropriate therapy. All types of eczema affect patient's quality of life adversely. However, they can be prevented by educating patients and their relatives to take adequate safety measures like using good quality emollients prophylactically.

**Key words:** Eczema, Papulo-vesiculation, Spongiosis, Acanthosis, Lympho-histiocytic infiltrate, Endogenous Eczema, Exogenous Eczema

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### INTRODUCTION

Eczema is an inflammatory skin reaction to various exogenous and/or endogenous stimuli. Clinical presentation includes itching, redness, scaling and papulovesiculation.

Histologically the condition is characterized by intercellular edema (spongiosis), acanthosis (of varying degree) and lympho-histiocytic infiltrate in superficial perivascular area of dermis.

There is no worldwide accepted definition of eczema. Eczema and dermatitis are most of the time interchangeable terms. All eczemas are dermatitis but every type of dermatitis cannot be

labeled as eczema.<sup>1</sup>

Various factors influence eczema. On the basis of these factors eczema is classified in two major groups (Table-I).<sup>2</sup> The first group "The exogenous eczema" is related to external triggers, although inherited tendencies also play some role. Second group "The endogenous eczema" implies the conditions mediated by the processes originated within the body.

Some of these conditions are precipitated by both external and internal factors, for example hand dermatitis is endogenous but precipitated by irritants like detergents. Another category

“unspecified eczema” is one which does not fit in any of these classes.<sup>3</sup>

Exogenous eczemas	Endogenous eczemas
Irritant eczema	Atopic eczema
Allergic contact eczema	Seborrhoeic eczema
Photoallergic contact eczema	Asteatotic eczema
Eczematous polymorphic light eruption	Discoid eczema
Infective eczema	Eyelid eczema
Dermatophytide	Eczematous drug eruptions
Post-traumatic eczema	Chronic superficial scaly dermatitis
	Pityriasis alba
	Hand eczema
	Venous eczema
	Juvenile plantar dermatosis
	Exudative discoid and lichenoid chronic dermatosis
	Metabolic eczema or eczema associated with systemic disease

**Table-I. Classification of the principal forms of eczema**

Eczematous dermatoses account for a large proportion of skin diseases. In developing countries it is the second major group of dermatoses after infections and infestations.<sup>4</sup> Some types of eczema are more prevalent in particular age groups, like atopic dermatitis is common in infants and young children, similarly asteatotic eczema is common in old age.<sup>5</sup>

## STUDY OBJECTIVES

### Aim of Study

To determine the frequency of different types of eczema.

### Primary Objective

To identify which type of eczema is more frequently

seen in a tertiary care hospital.

### Secondary Objective

To increase the awareness among medical professionals about this commonly occurring phenomenon.

### Rationale

In Pakistan, a lot of work has been done in atopic dermatitis. As far as other forms of eczema are concerned very few studies are available. Therefore, we have undertaken a study which shows frequency of different patterns of eczema in patients presenting in a tertiary care hospital. We hope to use the findings as our baseline data to understand the pattern of skin disease and to plan dermatologic health care programs for patients in Pakistan.

## PATIENTS AND METHODS

### Study Design

Descriptive, Prospective, Cross-sectional.

### Subject Selection and Withdrawal

#### Inclusion Criteria

New patients with different patterns of eczema were included.

Patients of both sexes and all age groups were included.

All indoor and outdoor patients were included in the study.

#### Exclusion Criteria

Follow-up cases were excluded.

Patients not willing to give consent.

### Study Procedures

Study was conducted at Hamdard University Hospital Karachi, from January 2013 to December 2013. After taking informed consent patients were registered for study by convenient sampling.

### Selection Criteria

Diagnosis was made by consultant dermatologist on the basis of detail history and clinical examination. Skin biopsy and patch test were performed where required. Other relevant investigations were also done according to

need. History was taken in detail, which included occupational history, history of other allergies, socio-economic status and a family history of similar or related disease.

## STATISTICAL PLAN

### Sample Size Determination

A total of 192 patients with different patterns of eczema were enrolled in the study during a period of one year.

### Statistical Methods

All data was entered and analyzed on latest version of SPSS. Only summary statistics will be used in analysis of the results. Percentages, mean, median, frequencies and cross-tabs were used to analyze the data.

## RESULT

A total of 192 patients with different patterns of eczema were enrolled in the study during a period of one year. There were 100(52%) males and 92(47.9%) females. Out of these 192 patients, 96 (50%) had endogenous eczema (41 females and 55 males), 66 (34.37%) were suffering from exogenous eczema (42 females and 24 males), while 30 (15.62%) patients were those who had unspecified eczema (17 females and 13 males).

Amongst these 96 patients of endogenous eczema (Table-II), hand dermatitis was most frequent presentation in 22(11.45%), followed by seborrhoaic dermatitis in 18(9.37%) patients. Atopic dermatitis was observed in 16(8.33%) patients and majority of them were children. Asteatotic eczema was more frequent in old age group and was seen in 13(6.77%) patients. Ptyriasis alba, discoid eczema and pompholyx was seen in 5.72% 4.68% and 2.08% patients respectively. Only three (1.56%) patients had stasis eczema.

Table-III shows patients with exogenous eczema. Out of sixty six patients 27 (14.06%) had allergic contact dermatitis, while 22 (11.45%) had irritant contact dermatitis. Infective eczema was seen in 5.20% and photo-allergic eczema in 3.64% patients only.

Type of Eczema	Male	Female	Total
Hand dermatitis	12	10	22
Seborrhoaic dermatitis	11	7	18
Atopic dermatitis	9	7	16
Asteatotic eczema	7	6	13
Ptyriasis alba	5	6	11
Discoid eczema	5	4	9
Pompholyx	3	1	4
Stasis eczema	3	0	3
Total	55	41	96

Table-II. Endogenous Eczema (n=96)

Type of Eczema	Male	Female	Total
Allergic contact dermatitis	10	17	27
Irritant contact dermatitis	7	15	22
Infective eczema	5	5	10
Photo-allergic dermatitis	2	5	7
Total	24	42	66

Table-III. Exogenous Eczema (n=66)

## DISCUSSION

Internationally, literature is very scanty regarding the frequency of different types of eczema. Although a lot of work has been done in individual types of eczema like hand dermatitis, atopic dermatitis etc.

Eczema is the second major group of skin diseases after infections in many South Asian countries.<sup>4,6,7,8</sup>

In USA the prevalence of eczema ranges from 8.7% to 18.1% between different states in one study.<sup>9</sup> In our country no such study of eczema prevalence is available.

We found allergic contact dermatitis in 14.06% patients, Abhijit and thappa<sup>10</sup> studied patients with lower leg eczema of different age groups and found allergic contact dermatitis to be most common type of eczema in 14.5% subjects, and results are comparable to our study.

Another study<sup>11</sup> conducted at Baqai Institute of Skin Diseases shows 7.5% had patients hand dermatitis, in our study this type of eczema was found in 11.45%, the difference is because of

large sample size in the former. Males were found to be affected more than females in our study, Uzma et al<sup>12</sup> found a male preponderance of hand dermatitis in a similar study.

Comparable results were found in a study conducted in UK<sup>13</sup>, which shows hand dermatitis in 15%, seborrhoeic dermatitis in 11% and atopic dermatitis in 5% patients, in our study these eczemas were found in 11.45%, 9.37% and 8.33% respectively.

Muzaffar et al<sup>14</sup>, reported frequency of atopic dermatitis in 13.3% children from children's hospital Lahore. Hanifin and Reed<sup>15</sup>, reported this prevalence in 6%. Our results (8.33%) are within the range of these two figures, being close to later.

Stasis eczema was observed in 1.56% cases in our study, in another study<sup>13</sup> it was higher (4%), however, only localized area of lower legs was studied in later. We found irritant contact dermatitis in 11.45%, whereas, this prevalence is much lower (5%) in a study conducted in Imphal, India. However females were found to be affected more than males in both the studies. Pityriasis alba (5.72%), pompholyx (2.08%) and photo dermatitis (3.64%) were found to be less frequent types of eczema, these are comparable to another study.<sup>11</sup>

In our study 15.62% patients had unspecified eczema. A study conducted in Ipswich, UK<sup>13</sup> shows 40% patients suffered from eczemas which were grouped as unspecified.

## CONCLUSION

From above study it can be concluded that contact dermatitis is most common form of eczema followed by hand dermatitis and seborrhoeic dermatitis. Atopic dermatitis was found more frequently in children, while astetotic eczema was more frequent in old age.

Eczema is not an uncommon disease in our population. It affects not only patient's quality of life but also cause psycho-social problems.

Eczema is one of the major burden of skin diseases in our society. This study is a little contribution in the literature regarding the frequency of different types of eczema. Large scale population-based studies are required to determine the frequency of different forms of eczema as well as the prevalence of eczema in our population.

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“The true sign of intelligence is not knowledge but imagination.”

Albert Einstein



**AUTHORSHIP AND CONTRIBUTION DECLARATION**

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dr. Humaira Maryum Agha	Conception to design, collection to assembly of data, Analysis of interpretation, Drafting, Statistical experters final approval	
2	Dr. Sadaf Ahmed Asim	Collection & assembly of data, Drafting the articlle	
3	Dr. M. Zafar Alam	Analysis & interpretation of data	
4	Prof. Zarnaz Wahid	Critical revision Statistical experties	