

## Eczema among the Outdoor Diabetic Patients of Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM) Hospital, Dhaka

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### Abstract

**Background:** Eczema is one of the important causes of public health problem. So, we conducted a study to assess the socio-demographic characteristics (age, sex, occupation, socio-economic condition, site of lesion, diabetes status etc) and to find out their relationship with the complicated eczema. **Objective:** The objective of the study was to find out the eczema cases attending in Department of Dermatology of Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM) Hospital and to identify the surface complications of eczema and the occurrence of eczema among the diabetic patients of BIRDEM Hospital. **Materials and Methods:** This cross-sectional study was carried out among the outdoor diabetic patients attending the Department of Dermatology of BIRDEM Hospital, Dhaka, Bangladesh during the period of 1<sup>st</sup> September to 31<sup>st</sup> November, 2014. **Results:** A total of 600 patients were interviewed. Of them, 60% were female and 40% were male. Among them, majority (29.17%) were in the age group of 40–49 years. Most of the subjects (66.67%) were service holders. Majority of the subjects (61.67%) were from low socio-economic status. In majority cases (41.67%) lesions were in hand and in 33.33% in legs. Diabetes was uncontrolled in 76.67% cases and only 15% controlled it and 8.33% controlled strictly. **Conclusion:** Factors like occupation, diabetes status etc. were found associated with high occurrence of eczema.

**Key words:** Eczema; Diabetes; Socio-economic status

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### Introduction

The skin is the largest organ of human body covering the entire surface which is subject to a wide range of medical conditions and infections ranging from simple manifestations to complicated ones.<sup>1</sup> Skin is a potential source for invasive infections in neonates from developing countries such as Bangladesh where the level of environmental contamination is exceedingly high.<sup>2</sup>

The relation between the skin and venereal diseases of the diabetic patients of different age groups and socio-

demographic characteristics is very complicated.<sup>3</sup> The socio-demographic aspects are very important because different societies and social groups have different faiths to explain the causes of illness, the modes of treatment.<sup>4</sup> Though it occurs in all classes but overcrowding, urbanization, industrialization, migration, excessive use of chemicals and cosmetics, environmental pollution, green house effect, delayed marriage and polygamy were found as factors for ignition and transmission of the disease.<sup>5</sup>

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A profile of skin diseases was done in children in Saurashtra in India, which revealed that the highest number of cases were of skin infections (25%) followed by allergy (8.5%) and miscellaneous (8.25%) disorders.<sup>6</sup>

Eczema is a form of dermatitis or inflammation of the upper layer of the skin which is broadly applied to a range of persistent skin condition.<sup>7</sup> Since eczema is the result of inflammation, all eczemas look alike. In a study done by Ahad et al all eczemas mostly resulted from contact with poison ivy, other contact dermatitis and atopic dermatitis.<sup>8</sup> It is most common in infants and children.<sup>9</sup>

The people of Bangladesh suffer from eczema because of ignorance, illiteracy, poverty and apathy towards health problem.<sup>10</sup> It is necessary to identify the risk factors in term of their age, sex, occupation, education, socio-economic condition, habit etc. As majority people suffers from eczema in their childhood, preventive measures should be taken in the early life.<sup>11</sup> A study of skin disease pattern at the outpatient department of Dhaka Medical College Hospital was carried out in 1990, which revealed that out of 41,062 cases, 3.46% were eczema cases.<sup>12</sup> Another study conducted on skin and sexually transmitted diseases at Enam Medical Collage Hospital (2009–10) revealed that in 12100 patients the percentage of eczema was 23.42%.<sup>13</sup>

Eczema is one of the most important skin diseases which cause the public health problem.<sup>14</sup> Though it causes negligible mortality but most of the cases of eczema have chronic course and sufferings.<sup>15</sup> Inadequate knowledge of the patients about skin diseases is another unfortunate situation to address this problem. In this perspective we designed this study to find out the eczema cases and to identify the surface complications of eczema and the occurrence of eczema among the diabetic patients attending the Department of Dermatology of Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM) Hospital, Dhaka.

## Materials and Methods

This descriptive cross-sectional study was conducted among the diabetic patients in the department of Dermatology (Outpatient department) of Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM) Hospital. The period of the study was from September

to November, 2014. The population of the study was the diabetic patients of all ages of different occupations. Among all the patients with skin disease only the eczema infected patients were selected. A total of 600 diabetic patients infected with eczema were selected purposively. A structured questionnaire was prepared at the beginning of the study. Before going to the actual study, the questionnaire was pretested. Then the final questionnaire was prepared.

**Data collection procedure:** Prior to data collection verbal consent was taken from the respondents. Data were collected through face to face interview by using the pretested questionnaire. The patients were examined by the professional doctor (dermatologist) and confirmed about the diagnosis of eczema before data collection. To build the support from the patients, the purpose of the study was explained to the patients. So the patients answered the questions to the best of their knowledge. Interview was conducted in a separate room for maintaining full confidentiality and each interview took about ten minutes.

**Data processing and analysis:** After completion of data collection, the obtained data were checked, verified and edited before tabulation. Data were copied in master compilation sheets and analyzed on the basis of the individual variable. Tables were made accordingly, narration of data was given and interpretation was done keeping in view the objectives of the study.

## Results

Table I shows distribution of respondents according to age. Mean age of the subjects was 47.3 years. It was observed that, out of 600 patients, 70 (11.66%) were aged between 20–29 years, 100 (16.67%) were aged between 30–39 years, 175 (29.17%) were aged between 40–49 years, 125 (20.83%) were aged between 50–59 years, 85 (14.17%) were aged between 60–69 years, 45 (7.5%) were aged between 70–79 years.

Out of 600 patients, 360 (60%) were female and 240 (40%) were male. It was seen that majority of the respondents 370 (61.67%) were from lower class, 180 (30%) were from middle class and 50 (3.33%) were from upper class.

In the present study, 200 (33.33%) were housewives and 400 (66.67%) were service holders. It was also observed that majority (41.67%) respondents had eczema in hand, 33.33% had it in legs and 18.33% in finger. Some other organs (6.67%) were also affected.

The study also revealed that out of 600 respondents majority (76.67%) did not control diabetes, 8.33% controlled strictly and 15% just controlled it. It means that majority of eczema cases were in respondents with uncontrolled diabetes mellitus.

Table I: Distribution of respondents according to age

Age (years)	Number	Percentage
20–29	70	11.66
30–39	100	16.67
40–49	175	29.17
50–59	125	20.83
60–69	85	14.17
70–79	45	7.5
Total	600	100

Table II: Socio-demographic characteristics and other variables of the patients

Variables	Number	Percentage	
Sex	Male	240	40
	Female	360	60
Socio-economic status	Lower	370	61.67
	Middle	180	30
	Upper	50	8.33
Occupation	Service	400	66.67
	Housewife	200	33.33
Site of lesion	Hand	250	41.67
	Legs	200	33.33
	Finger	110	18.33
	Others	40	6.67
Diabetes	Strictly controlled	50	8.33
	Controlled	90	15
	Uncontrolled	460	76.67

Strictly controlled, HbA1c <7%; Controlled, HbA1c 7–10%; Uncontrolled, HbA1c >10 %

### Discussion

Eczema is one of the public health problems of mankind. It is found more or less in all ages and sexes and classes of the society and creates community health problems in the developing countries.

In the present study main variables were age, sex, occupation, educational status, knowledge about eczema, socio-economic conditions etc.

In the present study, the total number of the respondents was 600. Out of 600 patients, 360 (60%) were female and 240 (40%) were male. Maximum patients affected with eczema were aged between 40–49 years. But a profile of skin diseases was done in children of Saurashtra in India<sup>6</sup>, which revealed 8.5% were eczema cases. Another study<sup>13</sup> in Enam Medical College revealed 23.42% eczema cases among the patients attending Skin VD OPD. But in this study it was high in 40–49 years, probably due to the higher proportion of diabetic patients in that age group.

In the present study 200 (33.33%) subjects were housewives and 400 (66.67%) were service holders. A study conducted in Bangladesh on “Pattern of skin and VD disease in a Textile Mill” also supported this.<sup>15</sup>

It was also observed that majority (41.67%) respondents suffered from eczema in hand. Then 33.33% had eczema in leg and 18.33% in finger. Some other organs (6.67%) were also affected. This study is comparable with a study<sup>10</sup> where eczema was more common on the leg (26.4%) than on the hand (20%).

In this study it was found that majority of the respondents (370, 61.67%) were from lower class, 180 (30%) were from middle class and 50 (3.33%) from upper class. So, the lower socio-economic persons were more affected by eczema. This is comparable with a study<sup>14</sup> where it was found that poor income group (54.46%) was more affected with eczema and least from higher income group (9.76%).

From this observation it can be said that eczema is a common disease in our country under certain prevailing conditions, such as lack of personal hygiene, undernutrition, low socio-economic condition etc. So it is important to take proper steps to address this problem.

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