

Quality of life among patients with hand eczema – A prospective study

Mrinal Gupta

Department of Anesthesiology, Government Medical College, Jammu, India

Corresponding author: Dr. Mrinal Gupta, E-mail: drmrinalgupta@yahoo.com

ABSTRACT

Background: Hand eczema is a common and distressing condition. Most of the cases of hand eczema have a multifactorial etiology. In genetically predisposed individuals, environmental exposure to allergens and irritants results in development of chronic hand eczema. As hands are important for routine day to day activities, hand eczema can deteriorate the quality of life. **Objectives:** The aim of this study was to study the effect of hand eczema on the quality of life. **Patients and methods:** Thirty consecutive patients (M: F=11: 19) with hand eczema were examined and disease severity was assessed by hand eczema severity index (HECSI) score; and quality of life by dermatology life quality index (DLQI) questionnaire. The data was evaluated using statistical tests like frequency, chi-square, oneway ANOVA, t-test etc. **Results:** The study included 11 (36.67%) men aged between 23 and 54 years and 19 (63.33%) women aged between 28 and 49 years. The majority of patients were in the 21–50 years age group (86.67%; n=26). Eight (26.67%) patients had a history of atopy. The most common occupational group among females was housewives (63.15%, n=12) while among the males the most common occupational group was farm workers (54.54%, n=6). The mean \pm S.D. for DLQI was 5.48 ± 4.19 and for HECSI was 16.34 ± 12.25 . There was no statistically significant impact of age, occupation and duration of disease on DLQI or disease severity except gender (p-value being 0.021 for DLQI; 0.029 for HECSI). There was no statistically significant correlation between HECSI score and DLQI. **Conclusions:** Hand eczema is a common problem predominantly seen in females in the middle age groups which can severely impair the quality of life.

Key words: Eczema; Contact dermatitis; Hand eczema; Occupational dermatoses; Quality of life

INTRODUCTION

Hand eczema is a chronic and distressing condition with a point prevalence of 1-5% among adults in the general population. Hand eczema is twice as common in women as in men and is more common among people with some kind of occupational exposure [1]. Hand eczema may be endogenous or exogenous in origin and most of the cases of hand eczema have a multifactorial etiology. Endogenous causes of hand eczema are atopic dermatitis, discoid eczema, hyperkeratotic eczema and pompholyx. The most common external cause of hand eczema is contact with irritant or mild toxic agents like soaps or detergents. Allergic contact dermatitis of hands is much less common than irritant and occurs only in people who have developed a contact allergy to specific substance such as rubber chemical, nickel

or other allergens [2,3]. Due to its high prevalence, chronic course and relation to occupation, it can have severe socioeconomic consequences and a massive impact on patient's quality of life.

The aim of this study was to study the effect of hand eczema on the quality of life.

MATERIALS AND METHODS

Thirty consecutive patients with hand eczema were included in the study after taking an informed consent. Details about age, sex, personal or family history of atopy (nasobronchial allergy, asthma, and childhood eczema), use of various products and its duration, onset, duration, and distribution of dermatitis were noted. Data on QoL was obtained from a self-administered

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questionnaire using the Dermatology Life Quality Index (DLQI). The DLQI is a 10-item questionnaire, which covers six aspects of daily life experienced during the past week: (i) symptoms and feelings, (ii) daily activities, (iii) leisure items, (iv) work and school, (v) personal relationship items, and (vi) treatment. The DLQI score is calculated by summing the score of each question, with a maximum score of 30 and a minimum score of 0. The higher the score, the greater the impairment of life with the disease.

The severity of hand eczema was assessed using a scoring system (Hand Eczema Severity Index, HECSI) [4]. It includes scoring of morphological signs such as erythema, infiltration, vesicles, fissures, scaling, and oedema as well as scoring of the affected area on the hands (fingertips, fingers, palms, back of hands, and wrists). The final score varies from 0-360.

RESULTS

The study included 11 (36.67%) men aged between 23 and 54 years and 19 (63.33%) women aged between 28 and 49 years. The majority of patients were in the 21–50 years age group (86.67%; n=26). The total duration of dermatitis was less than 1 year in 21 (70%) patients, 1–5 years in six (20%) patients, and more than 5 years in three (10%) patients. The minimum duration was 1 month and the maximum duration was 6 years, and the mean duration was 19 months. Eight (26.67%) patients had a history of atopy. The most common occupational group among females was housewives (63.15%, n=12) followed by students (21.05%, n=4) while among the males the most common occupational group was farm workers (54.54%, n=6), followed by office workers (27.27%, n=3). The disease was bilateral in 86.67% patients (n=26). Palms were involved in 46.67% (n=14) patients, fingers in 30% (n=9) patients, dorsa of hands in 16.67% (n=5) patients and whole hand in 6.67% (n=2) patients. Scaling was the most common presentation seen in 70% (n=21) patients followed by erythema, fissuring, hyperpigmentation, papules, papulovesicles, vesicles and oozing. Discoid eczema was the commonest morphological pattern seen in 36.67% (n=11) of cases, followed by hyperkeratotic eczema in 30% (n=9), palmar and vesicular palmar eczema in 13.33% each (n=4) and fingertip eczema in 6.67% (n=2) cases.

The mean±S.D. for DLQI was 5.48±4.19 and for HECSI was 16.34±12.25. DLQI range varied between

2-20 while HECSI varied between 2- 88. There was no statistically significant impact of age, occupation and duration of disease on DLQI or disease severity except gender (p-value being 0.021 for DLQI; 0.029 for HECSI). There was no statistically significant correlation between HECSI score and DLQI.

DISCUSSION

Hand eczema is one of the most common dermatological disorders encountered in dermatological practice. Irritants and contact allergens are the major etiological agents in hand eczema and they frequently co-exist. Hand eczema has been found to cause a severe impairment of quality of life owing to its chronic and recurring course.

Hand eczema affects both the sexes but is predominant among the females as reported in various studies [6,7]. Our study included 11 (36.67%) men aged between 23 and 54 years and 19 (63.33%) women aged between 28 and 49 years. This is probably due to increased exposure of females to wet work, soaps and detergents while washing and to vegetables while cutting and cooking. Occupation has significant bearing on hand eczema because of exposure to various allergens at workplace. The most common occupational group among females was housewives (63.15%, n=12) while among the males the most common occupational group was farm workers (54.54%, n=6). This observation is in agreement with the study conducted on hand eczema by Kishore et al who also found housewives to be the most common occupational group in females and skilled and semiskilled workers among males [8]. There are several types of hand eczema with a distinctive appearance of which the cause is unknown. Discoid eczema was the commonest morphological pattern seen in our study, followed by hyperkeratotic eczema palmar and vesicular palmar eczema. Laxmisha et al, studied 36 cases of hand eczema and found fissuring in 19 cases, hyperkeratotic type in 4 cases, vesicular type in 3 cases, and pompholyx in 1 case [5].

According to the results of the present study, hand eczema has significant effect on the quality of life of subjects. Based on the interpretation of DLQI questionnaire score, mean DLQI score obtained in the present study (5.48) shows that hand eczema has affected the quality of life of patients significantly. In a multicenter study performed in 10 Europe clinics by Agner et al, in 50% of studied patients with hand eczema, the DLQI score has been ≤8 [9].

In Van Coevorden study in Poland the quality of life of patients before medical interventions has been evaluated too and the average score of DLQI has found to be 9.7 ± 6.6 [10].

Similar to the study by Agner et al, it was observed that although females had less severe hand eczema than males, QoL was equally affected [9]. This may stem out of greater cosmetic concern in females when compared to males. However in contrast to their study, age, occupation, and duration of disease did not significantly affect the quality of life or disease severity in our patients. There was no significant correlation between disease severity assessed by HECSI score and quality of life, however patients with even low HECSI score had a significant negative impact on their quality of life.

LIMITATIONS

Our study had certain limitations. It was a single centre study with a small number of patients which may not represent the whole population.

CONCLUSIONS

Hand eczema is a common problem predominantly seen in females in the middle age groups which can cause significant lowering of quality of life. In the treatment process of patients with hand eczema, dermatologists in addition to treating lesions should pay special attention to other aspects of patients' wellbeing.

Statement of Human and Animal Rights

All procedures followed were in accordance with the ethical standards of the responsible committee on

human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008.

Statement of Informed Consent

Informed consent was obtained from all patients for being included in the study.

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