

Psycho-affective impact in atopic dermatitis in correlation with DLQI score

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ABSTRACT

Atopic dermatitis is a very well-defined clinical entity with genetic determinism and undulant evolution, with periods of calm and periods of flare. Each flare-up is caused by an aggravating factor which may be from the group of foods, drugs, infections, contact allergens, etc. Lately the number of cases diagnosed in children, but also among adults has grown, and many of these cases were associated with significant impairment of quality of life. Mentally and emotionally stress seems to be the key element that closes the cycle of skin lesions of atopic dermatitis, atopic dermatitis patients being frequently confronted with depressive episodes and anxiety. Measuring instruments for the psychological involvement in patients with atopic dermatitis are limited, but one of the most commonly used is the DLQI score, that allows quantifying the impact of disease on quality of life. We present correlations found between DLQI score, severity of the disease and psycho-affective impact of atopic dermatitis.

KEYWORDS

atopic dermatitis, quality of life, depression, anxiety, psycho-affective impact

INTRODUCTION

Quality of life, from a medical standpoint, is defined by the ability of the patient to enjoy a normal life, in all respects (family, work, interpersonal relationships, etc.). This term dates from 1970 and was introduced as a reflection of a holistic approach to the patient, and involves two aspects: objective (clinical and investigative) and subjective (assessed by the patient). The difference between the two aspects is induced by various factors: cultural, economic, of the medical system, the number of patients participating, etc.

Life of patients with dermatological disorders can be influenced in various ways: patients may present severe symptoms (itching, burning, pain, etc.), extensive skin lesions or limited, but located on exposed areas, modifications resulting in a significant psychological discomfort.

Because of these problems, simple aspects of daily life can be profoundly altered: service (work), personal care, home, and clothing chosen, interrelation with life partner and decrease the ability to concentrate, being influenced daily or occasional activities that require attention, concentration (service, courses, taught, drove, etc.).

This indicator, although insignificant at first glance, it becomes extremely important in conditions that stress is one of the aggravating or predisposing factors for the skin lesions and symptoms of skin diseases (psoriasis, lichen planus, eczema, etc.), but also when discussing about patient compliance to therapies administered.

One of the most used questionnaires is DLQI (*Dermatology Life Quality Index*), intended for use by patients over 16 years. It is simple to use, not necessary more than five minutes to be completed, without requiring further explanation from the medical staff. DLQI Questionnaire can be used in patients with atopic dermatitis

to assess the impact of the disease in terms of professional, social and personal activities.

Besides total value DLQI score has another possibility of interpretation which is related to the meaning of responses, depending on the segment studied: symptoms and feelings (item 1, 2), daily activities (item 3, 4), leisure (item 5, 6), school/work (item 7), personal relationships (item 8, 9), treatment (item 10).

Studies from the point of view of the psycho-affective impact of atopic dermatitis patients have suggested that they have more frequently difficulties in describing and verbalizing emotions associated with the disease, which causes worsening of the skin lesions or maintenance of symptoms, producing the somatization of emotional tension.

Of all cases of diagnosed atopic dermatitis in childhood, only 10 % persist in the adult, who has led to studies to identify the factors that favour the persistence of clinical manifestations, despite living arrangements and a right regimen led.

Pomay – Ray (1989) observed in patients with atopic dermatitis a decrease in self-esteem (narcissistic injury), and difficulties in interpersonal relationships. These patients develop depression, anxiety, and aggressive tendencies (fear of losing love, the onset of uncontrollable instincts). The skin will get inexpressible internal voltage discharge, which will lead to worsening and maintenance of the symptoms and skin lesions.

Consoli Save – Pédebas J. *et al.* (2003) found that patients with atopic dermatitis are more vulnerable to situations of stress, mental trauma reflected in worsening of skin manifestations. Alexithymia, defined as a lack of words to express their emotions, reflected in the inability of patients to identify and verbalize emotions and distinguish active sensations. The authors identified, using psychological tests (Rorschach Questionnaire) in patients with atopic

dermatitis, a high degree of frustration, social withdrawal tendency, and difficulties in managing relationships.

Yet which of the factors defining disease as atopic dermatitis is the most influencing patient's quality of life?

Known as a major diagnostic criterion, itching is the main factor in lowering the quality of life of patients complained of atopic dermatitis. Negative psychosocial effect of atopic dermatitis on quality of life is well known, itching, secondary sleep disturbances, social impact of skin lesions, affecting the patient in terms of social (academic/professional/social status), but also financially.

From the point of view of psychiatric pathologies, depression and anxiety are common in patients with atopic dermatitis, in direct proportion to the severity of atopic dermatitis and severity score values of DLQI.

Atopic dermatitis is a chronic pathology with a significant genetic component, characterized by cutaneous lesions of eczema, with usual onset before one year and spontaneous improvement in 70 – 80 % of cases before the age of six years. Increasing prevalence in recent decades can be explained preferentially by the involvement of environmental factors.

Diagnostic criteria for atopic dermatitis, the most used in dermatological practice, Hanifin and Rajka's criteria (1980), are classified in major criteria (pruritus, typical morphology and distribution characteristic skin lesions, family history of atopy) and minor (xerosis, ichthyosis, elevated serum IgE, etc.).

New diagnostic guide for atopic dermatitis (Williams *et al.*, 1995) states that the patient must have as main criterion pruritic condition (or parental report on scratching a child), plus three or more of the following: history of achieving skin folds as folds of elbows, behind knees, front of ankle or neck; personal history of asthma or rhinitis (or history of atopic di-

sease in a relative degree one or those under four years); history of general dry skin in the last year; visible flexural dermatitis (or dermatitis touching cheeks/forehead and extension parts of the limbs in a child under four years); onset under the age of two years (not used if child is under four years).

As shown in both diagnostic guidelines presented itching is a major diagnostic criterion for atopic dermatitis. This symptom is the one that most affect patient quality of life. Although most patients with atopic dermatitis and their careers are familiar with the disease, however there is an increased risk for developing depression or anxiety episodes.

MATERIAL AND METHODS

We conducted a study on 30 patients with clinical diagnosis of adult atopic dermatitis. We have not included in the study group children, because the Questionnaire DLQI is indicated only after 16 years. Most patients in the study group are situated within the range 20 – 40 years, during which exposure to allergens is much higher (cosmetics, mainly, but also perfume, jewellery, etc.), and socio-economic impact of the disease is very important. The average age of patients in this study group is 36.97 ± 2.36 in the total group, in the group of women being 35.54 ± 13.12 (minimum 22, maximum 67), and $42, 67 \pm 11.59$ (minimum 28, maximum 58) in male group. These data correspond with data from international studies, publications on atopic dermatitis with onset in adulthood is low, but showing the highest prevalence of cases in the age group 25 – 45 years.

We chose patients with chronic lesions, with repeated exacerbations with significant impact on daily activities. An initial assessment was conducted and one to six months of clinical supervision, with the establishment of the correct therapeutic measures, accompanied by appropriate living arrangements. All groups were explained by risk factors, the need to respect

some simple rules of hygiene and nutrition, rules involving avoiding aggravating factors and food allergens.

Overall assessment of the impact of skin disease on quality of life in atopic patients in the

study highlighted very important impact on quality of life in 23.3 % and important impact in 53.4 %, all patients being with values above five (considered a benchmark in interpretation of DLQI score) (Table I).

Score interpretation	DLQI score	Initial		Control	
		n	%	n	%
Without effect	0 – 1	-	-	2	6.7
Low effect	2 – 5	-	-	13	43.3
Moderate effect	6 – 10	7	23.3	6	20.0
Important effect	11 – 20	16	53.4	9	30.0
Extremely important effect	21 – 30	7	23.3	-	-

Table I. Distribution of atopic patient on DLQI score

Initially, DLQI score ranged from 7 to 30 with a wide variance of the set of values (36.95 %). Most subjects had DLQI scores in quartiles Q25-Q75, mainly between 11 and 20, which highlight an important impact on the quality of life.

Control visit after six months reveals, in this group, a significant reduction in the average score (6.93 ± 3.88 *vs.* 16.67 ± 6.16) ($p < 0.001$), characteristic of the lot, at the moment of the control, being a moderate impact of the disease in the quality of life (Table II).

DLQI	n	Mean	Standard deviation	Minim	Maxim	Variance (%)	Quartile		
							25 th	50 th (Median)	75 th
Initial	30	16.67	6.16	7	30	36.95	11	18	20
Control	30	6.93	3.88	0	13	55.99	4	7	11

Table II. Statistical indexes of DLQI score in the group of patients with atopic dermatitis

Individual data analysis showed an improvement in the quality of life of patients with atopic dermatitis, but burdened by persistent DLQI scores within easy-moderate impact on the quality of life.

RESULTS AND DISCUSSION

The persistence of elevated DLQI scores despite appropriate living arrangements and fair treatment resulted raises the question: what are the factors that favour the persistence of clinical manifestations? There is a correlation between the psycho-emotional status and severity of atopic dermatitis?

No studies to date to identify the incidence of depression and anxiety in patients with atopic dermatitis or degree of association of these symptoms depending on the DLQI score and severity of atopic dermatitis.

As the eyes are the mirror of the soul, the skin may be reflection at the surface from the depths of our mind; skin and brain are two polar ends embryonic development, coming from the same neuroectoderm.

Involvement of psychic in numerous skin disorders (psoriasis, lichen planus, alopecia, etc.) has been the subject of numerous studies, in

this phenomenon is likely involved brain neurotransmitter as acetylcholine, endogenous opioids. Chronic stress is also involved in modifying the activity of the pituitary-adrenal HPA axis, neuroendocrine dysfunction may perpetuate

allergic inflammatory reactions initiated and lead to worsening of skin diseases, thus appear a vicious circle that will result in a major change in the quality of life of patients, with psycho-emotional and important alterations.

CONCLUSIONS

Atopic dermatitis is one of the pathologies with increasing frequency and coverage, with a psycho-social impact and economic importance. Clinical trials effectuated in recent years have highlighted the role of stress as a favouring factor in skin lesions, but also as an aggravating factor, with a severe impact on disease progression, forming a vicious circle that leads to chronic skin lesions and augmenting impact on quality of life patient.

Taking into account these clinical assumptions, the major socio-economic impact (number of days of hospitalization, medical services, medication, sick leave, absenteeism, etc.), psycho-emotional impact of atopic dermatitis should be the subject of interdisciplinary studies related to the mutual influence of psychological factors on quality of life and cutaneous disease.

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