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Analysis of adult atopic dermatitis in-patient treatment effectiveness

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ABSTRACT

We compared early results of in-patient treatment for patients with adult Atopic Dermatitis. Current Ukrainian clinical protocols for abovementioned skin diseases specify treatment strategy with wide range of treatments. It was determined that almost all AD patients are discharged with at least minor signs of the disease. Early follow-up allowed to identify part of the patients with relapse of AD or absence of any further diseases regression.

Keywords: atopic dermatitis, SCORAD, treatment

1. Introduction

More than 10% of world population suffer from different allergic diseases^[1, 2]. According to WHO reports allergic skin diseases affect up to 1000000 people yearly^[3]. Chronic allergic skin conditions like Atopic Dermatitis, Eczema and Lichen Simplex Chronicus reach 10% to 40% of dermatologic cases in routine dermatology practice from country to country^[4]. The most accentuated disease among them is Atopic Dermatitis (AD), chronic recurrent disease with intensive skin itch and age-dependent typical clinical findings. Every year above 29 billions new cases of AD are registered all over the world⁵. As common triggers for AD suggested different internal and external factors influenced the skin with impaired skin barrier^[6, 7].

The aim of this study was to review common results of current standard strategy for in-patient treatment for Adin Ukraine, as well as results of early patients follow-up after discharge.

2. Materials and methods

Data of 67 patients with AD treated at dermatology hospital were examined. Among them there were 47 male and 20 female patients aged from 18 to 48 years. 42% of the patients had severe progression, 46% moderate and 12% mild progression of AD. For all study patients clinical diagnosis was checked with diagnostic criteria by Hanifin and Rajka^[8]. Estimation of a disease severity as well as the treatment effectiveness was based on SCORAD index calculation for all study patients^[9].

The patients were treated by dermatologists in accordance with Ukrainian clinical protocols for AD: Order of Ministry of Health of Ukraine no.312 from 08.05.2009. Selection of adequate treatment from listing specified by the clinical protocols was the matter of dermatologists' choice. Dermatologists' choice for in-patient treatment strategy was investigated for all study patients.

Statistical analysis of the results of research carried out by conventional methods in experimental medicine using of the software package "Microsoft Excel-2000".

3. Results and discussion

Since SCORAD index was implemented in clinical dermatology it started to serve as common way to estimate seriousness of AD progression as well as helped to identify treatments success independently on individual feelings of a dermatologist. Mean SCORAD index for studies AD patients was 45 (39; 57) points at admission. For 28 (42%) patients AD relapse was estimated as severe ($k > 50$), for 31 (46%) as of middle severity ($25 < k < 50$), and 8 (12%) patient had mild progression of AD. Itch intensiveness was measured in addition for all patients. Mean itch was detected as 6 (5; 8) points from 10-points scale.

Psychological stress is considered as one of the most common triggers for AD. Our investigations showed that among studied AD patients the stress at work or university study was suspected as actual trigger for 4 patients with mild progression, 48% of patient with moderate and 21% of patients with severe progression of AD. Family stress was suspected as actual trigger even less

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frequently – for 3 patients with mild, 29% with moderate and 7% of patients with severe AD. The more severe was AD relapse, the less often patients pointed psychological stress as considerable trigger for the disease relapse.

Microbial antigens and super-antigens are well-known triggers for AD. In addition to AD worsening they also may produce secondary bacterial skin infections. 21% of studied adult AD patients were admitted with this complication. All of them were either with moderate (5 patients from 14) or severe progression (9 patient from 14) of AD.

Current version of Ukrainian clinical protocols for skin diseases management specify treatment strategy for chronic skin diseases like AD. Despite a possibility for a dermatologist to select among quite wide range of treatments allowed depending on his/her knowledge the typical treatment of a patient with abovementioned skin diseases includes common types of medications. Up to 100% of adult AD patients were treated with antihistamines, anti-allergic drugs of different groups, sedatives, tranquilizers, pancreatic enzymes, and topical glucocorticoids. The rest of allowed treatments, like sorbents systemic glucocorticoids, cytostatics, systemic antibiotics, UVB-therapy etc. were prescribed with different frequency but routinely less than for 70% cases.

It is completely evident that AD patients are discharged with significant regression of AD. Due to that all studied patient showed substantial decrease of SCORAD index at the end of in-patient treatment. Mean SCORAD for a group decreased to 20 (14; 26) points ($P < 0,05$). There was no one with SCORAD index specified for severe AD on the contrary to 28 patients at admission. Unfortunately 28% (19 patients) still had moderate index results. High SCORAD at discharge could be explained by big affected surface and remained inflammatory erythema at some focuses of lesions. The rest 72% (48 patients) were discharged with low index values as a result of substantial regression of AD under the treatment. Skin itch at discharge was also found decreased to mean 2 (1; 3) points ($P < 0,05$). There were no patients with SCORAD calculated as “0” at discharge. The reason may be explained by the index calculation details: dryness of skin, lichenification at typical sites and episodically itches are common for AD patients and produce some points for the index. Due to that it is impossible to achieve “0” SCORAD for majority of AD patients shortly after discharge and even later.

At discharge all studied AD patients as routine were given recommendations regarding day by day skin care, diet and habits which may prevent further aggravations of the disease. Some of them continued antihistamines and sedatives intake due to residual skin inflammation and symptoms like erythema, skin itch, scratching of skin. All patients were advised to use topical emollients, some of them – pimecrolimus or tacrolimus creams. On the contrary to in-patient treatment it was not possible to control whether the patients followed given prescriptions and recommendations in full. We think, some difference between prescribed and obtained out-patient treatment and care provided controversial results of the treatment effectiveness in one month after discharge.

In general, in one month after discharge majority of AD patients showed further improvement: erythema, lichenification and scratching regression, itch and sleeping

disturbance disappearance. Mean SCORAD of the group decreased to 15 (11; 20) in comparison to value at discharge ($P < 0,05$). 55 (82%) patients from 67 showed further decrease of SCORAD level. Unfortunately 6 (9%) patients stayed with the same disease severity and another 6 (9%) demonstrated even worsening of SCORAD score. 3 (4%) patients still had moderate signs of AD. Another 64 patients presented some signs of AD of mild severity and SCORAD index less than 25 points. Itch intensity was almost the same as at discharge. Mean group itch value was 2 (2; 3) points.

Obtained results additionally show great importance of AD out-patient treatment and follow-up. Short in-patient treatment courses are not able to remove the disease symptoms completely. All adult AD patients require prolonged out-patient therapy and/or education of AD patients to avoid triggers and keep the disease under control.

4. Conclusions

Atopic dermatitis remains common problem of modern dermatology and requires clear approach for making diagnosis and treatment. Analysis of dermatologists' choice for in-patients treatment of Atopic dermatitis showed quite similar set of medications in use for all checked patients. The only difference was in frequency of prescription for some of medications what is quite clear to explain. Majority of adult AD patients have signs of active disease at discharge even if the treatment showed high efficacy. One month follow up showed even worsening of the disease in a part of the patients probably due to broken regimen or non-followed recommendations.

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