

The Impact of Recent Life Events on Patients with Alopecia Areata: A Study from Iran

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Abstract

Objective: Alopecia areata affecting 0.1%-0.2% of humans, occurring in both males and females. Initial presentation most commonly occurs in the late teenage years, early childhood, or young adulthood, but can happen in people of any ages. In the present study, we were to find any association between onset of alopecia areata (AA) and preceding emotional stress.

Subjects and methods: Totally 47 patients with diagnosed AA and 47 controls (healthy subjects refer for cosmetic reasons, matched on age and gender) enrolled to our study at the dermatology clinic of Hazrat Rasoul Akram hospital, Tehran, Iran. Participants were administered paykel's questionnaire for Recent Life Events, also demographic data of all subjects registered simultaneously.

Results: The distribution of alopecia in patients was as follow: head 30 (63.8%), beard 16 (34%), body 1 (2.1%). The total score of recent life events (last 12 months) was not different significantly between the alopecia patients (6.9 ± 1.01) and the comparison subjects (7.12 ± 0.91). $p=0.95$

Conclusion: Our results do not support the hypothesis that stressful life events associated to occurrence of alopecia areata.

Keywords: Alopecia areata; Recent life events ; Iran

Introduction

Alopecia areata (AA) is a non-scarring, inflammatory, hair loss disease that can affect men, women and children, the factors that activate the onset of alopecia areata and the mechanisms of its development are not fully understood. Circumstantial evidence suggests alopecia areata is an autoimmune disease where cells of an individual's own immune system prevent hair follicles from producing hair fiber [1]. Although alopecia is not life threatening, the pressure of an image oriented society can make hair loss psychologically devastating for those affected, their families and friends. The course of disease is not predictable and it is often associated with periods of hair loss and regrowth. The clinical severity of a patient's AA may not be a good indicator of subsequent downturn in quality of life or psychological well-being [2]. In this study, we were to find any relationship between Alopecia areata and psychological stress.

Subject and Methods

Participants were entered in the present study at the outpatient clinics of Hazrat Rasoul Akram dermatology clinic, Tehran, Iran. All consecutive admissions for alopecia areata were considered for enrollment, and the following inclusion criteria were used: at least 8 years of education, formal diagnosis of alopecia areata by a dermatologist. The comparison group consisted of patients with similar age and with at least 8 years of education who were referred for cosmetic reasons and otherwise healthy.

Information about demographic variables, area of alopecia areata, and age at onset and Stressful events were collected using Skindex-61 questionnaire for Recent Life Events; a questionnaire covering 61 events in which total score will be calculated on the number and severity impact [1-3] of each life events. Participants were asked if each event occurred or did not occur in the preceding 12 months. We used the validated Iranian version [3,4]. The study protocol was approved by

the institutional ethical committee. The study protocol was approved by the institutional ethical committee. The study was explained to all eligible patients who were then invited to participate. Those who accepted signed a conformed onset form and were assigned to a research dermatologist. All stressful events occurring in the preceding 12 months were included in the analysis expect for events that occurred to alopecia patients after disease onset. The similar questionnaire with omitted variables pertaining to AA exclusively distributed among health subjects with matched age and gender for comparison group.

Data were first analyzed with univariate statistics. The chi-square test was used as appropriate to analyze differences between groups in categorical variables. The t-test was used to study differences in continuous variables. All analyses were run under SPSS, version 15.0 for windows.

Results

Totally 94 subjects completed the questionnaires (47 cases and 47 controls). The mean age and score of all subjects were respectively, 28.56 ± 8.34 (14-48) years old and 7.05 ± 6.58 (0-27). Male subjects considered of 54(57.4%) and females 40(42.6%); About 49(52.1%) of all were single, 44 (46.8%) married and only 1(1.1%) of them was divorced. The distributions of educational state were reported: no

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Variables		Cases	Controls	p-value
Age	Mean ± Sd	28.61 ± 8.51	28.61 ± 8.35	0.91*
Sex	Male	27(57.4%)	27(57.4%)	1.#
	Female	20(42.6%)	20(42.6%)	
Material status	Single	25(53.2%)	24(51.1%)	0.6#
	Married	22(46.8%)	22(46.8%)	
	Divorced	0(.0%)	1(2.1%)	
Income (Toman)	<200000	9(19.1%)	9(19.1%)	0.99#
	200000-400000	12(25.5%)	13(27.7%)	
	400000-600000	14(29.8%)	13(27.7%)	
	>600000	12(25.5%)	12(25.7%)	
Occupation	Employee	15(31.9%)	12(25.5%)	0.95#
	Workman	2(4.3%)	1(2.1%)	
	Housewife	7(14.9%)	10(21.3%)	
	Businessman	11(23.4%)	13(27.7%)	
	Student	8(17.0%)	8(17.0%)	
	Unemployed	1(2.1%)	1(2.1%)	
	Engineer	3(6.4%)	2(4.3%)	
Education	No diploma	12(25.5%)	14(29.8%)	0.58#
	Diploma	22(46.8%)	17(36.2%)	
	Bachelor or master	13(27.7%)	15(31.9%)	
	Doctoral degree	0(.0%)	1(2.1%)	
Score	Mean ± Sd	6.97 ± 1.01	7.12 ± 0.91	0.95#

*: T.test, #: chi2 test, p<0.05 is considered significant statistically

Table 1: The characteristics of cases and controls are compared below.

diploma 26(27.7%), diploma 39(41.5%), bachelor or master 28(29.8%), doctoral degree 1(1.1%). The income (Toman) per month of subjects categorized in four groups which expressed as <200000 T seen in 18(19.1%), 200000-400000 T in 25(26.6%), 400000-600000 T in 27(28.7%) and finally >600000 T in 24(25.5%).

As a whole, 24(25.5%) of subjects were employee, 24(25.5%) businessman, 17(18.1%) housewife, 16(17%) student, 5(5.3%) engineer, 3(3.2%) workman, 2(2.1%) unemployed. The characteristics of cases and controls is summarized in table (1) as it shown, there were statistically (p>0.05) no significant difference between cases and controls in the following variables: age: 28.51 ± 8.51 versus 28.61 ± 8.35 years, score of questionnaires 6.97 ± 1.01 (ranges: 0-27) versus 7.21 ± 0.91. 91(Ranges:0-24) also in cases 11(23.4) versus 6(12.8%) as comparison subjects had zero score (chi2 test ,p>0.18) and no differences between two comparing groups seen in the distribution of other variables such as gender, marital status, income per month, occupation, education al level (Chi2 test, p>0.05).

The duration of alopecia was 9.85 ± 1.79 months (range: 5-11). The distribution of alopecia in patients was as follow: head 30(63.8%), beard 16(34%), body 1(2.1%). Patients who had alopecia areata (AA) on beard area had higher age (31.25 ± 7.09 versus 27.3 ± 9.01 years, p=0.13) in comparison with head area.

Discussion

The pathogenesis of AA has not yet been clarified. Genetic predisposition and environmental factors have been identified in the etiology if the disease; however, its cause or causes remain unknown. AA affects the young with an equal sex ratio [5,6]. Our youngest patient was 14 years of age and the oldest was 45 years. The age of onset of AA is consistent with that of previous reports, [7-9] where most commonly experienced their first episode of AA in the first four decades of life. Juvenile AA is thought to be more severe and has a less favorable prognosis [7] in accordance with studies [5-9].

Alopecia areata on head, bear and body respectively involved 30(63.8%), 16(34%), 1(2.1%) of all patients. Patients with AA on beard area versus head showed higher age, which was not significant

statistically and also, had higher score of recent life events which was mildly, significant.

Although an association between stressful events and the onset of alopecia areata has been suggested by some uncontrolled recontrolled retrospective studies and even some case-control studies [10-13]; but in contrary other studies found only a marginally significant association, or negative results [14,15]. Also in two different studies in [Italy [16] and Turkey [17] found no association between AA and recent life events, which is in line with our present findings. Albeit mentioned studies used "Life event questionnaire" as well.

The mean score of recent life events did not differ between a group of patients with alopecia areata and a comparison group of patients. It should be emphasized that our findings do not imply that psychological stress has no role in alopecia areata because we assessed only discrete life events and did not investigate other important sources of stress that may adversely affect health, such as chronic stress situations and minor daily hassles [18]. In a study by Colon et al. [19] high rates of depression (39%) and generalized anxiety disorder (39%) were noted in a total of 31 AA patients. Similar results have also been reported in two different studies [20,21] Also, some studies investigated the role of potentially modulating susceptibility to AA, such as social support [22,23] attachment security, [24] or alexithymic [25]. Inspite of small study group size in those studies, they found that the onset of alopecia areata tended to be associated with avoidant attachment, high characteristics, and poor social support. Hence further studies are recommended to be done to clarify possible causes of AA.

Conclusion

Our results do not support the hypothesis that stressful life events associated to alopecia areata occurrence.

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