

The Impact Role of Childhood Traumas and Life Events in Patients with Alopecia Areata and Psoriasis

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Abstract

Background: Alopecia areata (AA) and psoriasis are common dermatological diseases which may be associated with psychosomatic origin. Close relationship with stressful life events has been shown both AA and psoriasis in previous studies. Dermatologic diseases which are thought to be psychosomatic origin are not examined about childhood traumas except AA. In the literature there is no study that investigates both stressful life events with childhood trauma in healthy individuals and dermatological diseases with psychosomatic origin such as AA and psoriasis.

Objective: To determine whether stressful life events and childhood traumas play a role in AA is the first aim of this study. If it is, will this role specific for AA as a second aim? The patients with psoriasis and healthy individuals were also investigated too.

Methods: Patients (range: 18-70 years of age) with a diagnosis of AA and psoriasis who admitted to Dermatology Outpatient Department of Baskent University Medical Faculty between August 2009 and July 2010 were recorded and analyzed for our study. Healthy individuals without past or present psychiatric symptoms proven by the Composite International Diagnostic Interview (CIDI) as control group were selected randomly. Forty patients with AA, 30 patients with psoriasis, and 50 healthy subjects as controls were stratified as three individual groups. The Childhood Trauma Questionnaire, the Life Events Checklist, The Beck Depression Inventory, and the Beck Anxiety Inventory and socio demographic data questionnaire were administered to the participants. Informed consent was obtained from all participants.

Results: The rate of childhood traumatic events, the stressful life events, anxiety and depression scores were significantly higher in both AA and psoriasis group than healthy controls. Significant difference was not found between AA and psoriasis patients.

Conclusion: Childhood traumas and stressful life events may play a role in the pathogenesis of AA. In addition, this role may also apply to other psychosomatic diseases as psoriasis. This result may let us understand the role of past and present psychological stressors in the etiology of dermatologic psychosomatic diseases. Psycho dermatologic new approaches are needed to evaluate stressful life events and childhood traumas.

Keywords: Alopecia areata; Psoriasis; Childhood trauma; Psychosomatic disease; Life events

socioeconomic status those stressful conditions or frustrations may lead to chronic psychiatric disorders.

Introduction

Alopecia areata (AA) is a dermatological condition that characterized by asymptomatic, well-defined patches of non-scarring alopecia that affects the scalp in approximately 90% of cases. AA is the most common cause of localized, non-scarring alopecia. Its prevalence is estimated around 1.7% [1]. It may first appear in childhood or later. The cause of AA is not fully understood, but immunologic and endocrine abnormalities, genetic disorders, infections, psychological stress factors are believed to play a part in the etiology of AA [2]. Wars, torture, political or non political violence, family problems, rape, sexual abuse, accidents and natural disasters are some of the causes of psychological and physical traumas. People are usually get involved to some stressful conditions and frustrations. In normal conditions, those may not lead any developmental problems, but in severe cases, according to the person's age, self power, genetics, and

The role of psychological factors in AA has long been a subject of debate, with various investigators reporting contradictory findings regarding the rates of psychopathology in patients with this condition, as well as the role of psychological events or stress in the onset of symptoms [2-4]. The role of lifetime events and childhood traumas has also been the focus of attention in AA patients, but there is only very limited number of reports about these two subjects [1,3,4]. To investigate the relationship of childhood traumas and stressful lifetime events with AA and psoriasis is purpose of our study with the comparison of healthy controls. Life events which occurred in the last one year are only included by previous studies with AA and psoriasis, but not childhood traumatic events. Our hypotheses was exposing to childhood traumas and stressful lifetime events more often in AA than healthy subjects physically and psychologically. However, this is not specific to AA patients.

Materials and Methods

Subjects

Approval for this study was obtained from the ethical committee of the Baskent University Medical Faculty. Patients (range 18-70 years of age) who admitted to the Department of Dermatology Outpatient Clinic, Baskent University Medical Faculty between August 2009 and July 2010 with a diagnosis of AA and psoriasis were included in this study. Literacy, mental capacity and answer to the test questions were other requirements for inclusion to this study. Healthy individuals without past or present psychiatric symptoms proven by the Composite International Diagnostic Interview (CIDI) were included to study, randomize [5,6]. Study groups were stratified as 40 patients with AA, 30 patients with psoriasis, and 50 healthy subjects as controls. Informed consent was obtained. All data about age, gender, duration of illness etc. recorded.

Methods

Socio demographic data questionnaire and Clinical Information Form and CIDI (anxiety and depression parts) which were filled by the investigator were administered to participated subjects. In addition, the Childhood Trauma Questionnaire [7], the Life Events Checklist [8], The Beck Depression Inventory [9], and the Beck Anxiety Inventory [10] were administered to all participants, too.

Beck Depression Inventory (BDI)

The BDI is a 21-item self-report inventory. Some of the items are related to symptoms of depression, while others are related to physical concerns such as sleep disturbances, loss of weight, etc. Other items investigate emotional (degrees of hopelessness, sorrow), motivational (willingness to work), and cognitive (concentration, self evaluation) aspects of life. Each question is rated from 0 to 3 points. The sum of the points shows the level of depression. The 1979 version of the BDI [11] is adapted for the Turkish population by Hisli [12,13]. The cut-off point was 17. BDI score over 17 points was defined as "Definite depression" in our study.

Beck Anxiety Inventory (BAI)

The BAI is a 21-item self-report inventory. The questions gather information about physical (feeling shaky, butterflies in the stomach), cognitive (being afraid something terrible will happen, fear of losing control), and emotional (feeling tense, angry) aspects of the individual's life in this survey. The BAI is adapted for the Turkish population by Ulusoy et al. [10,14].

Childhood Traumatic Questionnaire

Childhood Traumatic Questionnaire is a 53-item self-report. It is developed by Bernstein and associates in 1994 [15]. The questions are about events experienced during childhood and adolescence. It has been translated into Turkish by Sar [16].

Life Events Scale (LES)

Life events were recorded according to a major life events inventory by Sorias [17]. The inventory covers 116 major life events, in which

every life event has two different scores, namely standard adjustment and distress scores. Each life event is thus scored on two dimensions. Higher scores indicate a higher stress level. In our study, patients were asked to record the events which had occurred during the 6 months prior to the onset of AA, psoriasis and healthy controls.

Composite International Diagnostic Interview (CIDI)

The CIDI is a comprehensive, fully-structured interview which is designed to be used by trained lay interviewers for the assessment of mental disorders according to the definitions and criteria of ICD-10 and DSM-IV. It is intended for use in epidemiological and cross-cultural studies as well as for clinical and research purposes. The diagnostic section of the interview is based on the World Health Organization's Composite International Diagnostic Interview (WHO CIDI, 1990). In this study we used anxiety and depression parts.

Statistical Analysis

Analysis was performed using SPSS 16.0 for Windows. In analysis, the scores which calculated by using CIDI Anxiety and Depression Section, CTQ, LES, BAI, BDI were evaluated as separate outcome variables. Whether the three different sample groups in study group have differences or not, in terms of the various measurements was questioned by the One Way ANOVA. $P < 0.05$ was evaluated as significant statistically. Independent variables were stated as normally-healthy, Alopecia Areata and Psoriasis. Dependent variables were the total points determined from CTQ, LES, BAI, and BDI. In post hoc analysis, Turkey test was applied.

Results

A total of 122 subject (55 (45%) male (M) and 67 (55%) female, M/F: 0.82) were recorded and analyzed. Forty-one subjects in AA, 31 subjects in psoriasis, and 50 subjects in control groups were evaluated. Mean ages were 32.9 ± 10.5 in AA group, 42.1 ± 14.8 in psoriasis group, and 35 ± 13.8 in control group. Females comprised 51%, 55%, and 58% of the AA, psoriasis, and controls, respectively. Significant difference was not found between groups according to age and gender. When the groups were investigated for substance abuse, smoking was similar in all 3 groups (between 32-37%). Alcohol consumption was higher in psoriasis group (20%). Alcohol consumption and smoking was similar in all 3 groups. There were no statistical differences between groups (Table 1).

The duration of the disease varied for AA and psoriasis group. The disease lasted longer than 5 years in 75% of the psoriasis patients whereas it was 14.6% in AA group. 63% of AA patients had their disease less than a year. Aesthetically non-disturbance was 9.7% in psoriasis group and 2.4% in AA group. 46.3% of AA patients and 22.6% of psoriasis patients were heavily disturbed aesthetically (Table 2). All 3 groups demonstrated statistically significant difference for mean depression scores ($F(2,119)=13.6$, $p < 0.05$). Mean depression points were not statistically significant between AA and psoriasis groups (Table 3). Mean anxiety scores were statistically significantly different for all 3 groups ($F(2,119)=20$, $p < 0.05$). There was no statistical significant difference between AA and psoriasis groups (Table 4).

	Alopecia areata		Psoriasis		Healthy		Total	
	n	%	n	%	n	%	n	%
Smoking	15	36,6%	10	32,3%	17	34,0%	42	34,4%
Alcohol	3	7,3%	6	19,4%	5	10,0%	14	11,5%
Both	6	14,6%	3	9,7%	6	12,0%	15	12,3%
None	17	41,5%	12	38,7%	22	44,0%	51	41,8%
Total	41	100,0%	31	100,0%	50	100,0%	122	100,0%

Table1: Substance abuse for the groups

	Alopecia areata		Psoriasis	
	n	%	n	%
Duration				
<3 months	16	39,0%	1	3,2%
3-12 months	12	29,3%	2	6,5%
12-24 months	1	2,4%	2	6,5%
2-5 years	6	14,6%	3	9,7%
>5 years	6	14,6%	23	74,2%
Location				
Scalp	29	70,7%	3	9,7%
Face	11	26,8%	1	3,2%
Neck	1	2,4%	1	3,2%
Arms	-	-	11	35,5%
Legs	-	-	6	19,4%
Back	-	-	3	9,7%
Chest	-	-	3	9,7%
Genitals	-	-	-	0,0%
Other	-	-	1	3,2%
Aesthetically disturbance				
None	1	2,4%	3	9,7%
Mild	9	22,0%	10	32,3%
Medium	12	29,3%	11	35,5%
Severe	11	26,8%	5	16,1%
Much severe	8	19,5%	2	6,5%

Table 2: Comparison of alopecia areata and psoriasis groups for the duration of the disease, and aesthetically disturbance.

Childhood Trauma Questionnaire mean scores were statistically significantly different between all 3 groups $F(2,119)=6.8, p<0,05$. Both in AA group and Psoriasis group CTQ scores were higher than healthy individuals and the differences were statistically significant $p<0.05$. Mean scores were higher in the AA group compared to psoriasis

group, but did not reach statistical significance (Table 5). There was statistically significant difference between all 3 groups for total LES adjustment scores $F(2,19)=6.4, p<0.05$. Mean scores were higher in the AA group compared to psoriasis group, but did not reach statistical significance (Table 6). There was statistically significant difference for mean distress scores between all 3 groups $F(2,119)=8.2, p<0.05$.

Groups	Mean	SD	Alopecia areata	Psoriasis
Alopecia areata	13.2	10.9		NS
Psoriasis	10.0	7.0	NS	
Control	4.9	3.8	$p<0.05$	$p<0.05$

Table 3: Turkey test results for BDI mean scores, NS: Not Significant, SD: Standard deviation, BDI: Beck Depression Inventory

Groups	Mean	SD	AA	Psoriasis
Alopecia areata	12.8	12.9		NS
Psoriasis	11.8	8.6	NS	
Control	5.0	4.7	$p<0.05$	$p<0.05$

Table 4: Turkey test results for BAI mean scores. BAI: Beck Anxiety Inventory, NS: Not Significant, SD: standard deviation: alopecia areata

Mean scores were higher in the psoriasis group compared to AA group, but did not reach statistical significance (Table 7). There was no difference between psoriasis and AA groups regarding the results of CIDI. The incidence of active anxiety, depression or depression with anxiety was 41% in the AA group. It was 22.7% in the psoriasis group. It was similar in both groups who did not have anxiety or depression. Previous anxiety or depression or depression with anxiety was 33.1% in the psoriasis group whereas it was 17.1% in the AA group (Table 8).

Variable	Mean	SD	Alopecia areata	Psoriasis
Alopecia areata	86.9	20.7	-	NS
Psoriasis	83.8	27.2	NS	-
Control	74.8	15.3	$p<0.05$	$p<0.05$

Table 5: Turkey test results for CTQ mean scores, CTQ: Childhood Trauma Questionnaire, NS: Not Significant, SD: Standard deviation

Variable	Mean	SD	Alopecia areata	Psoriasis
Alopecia areata	209	22.0	-	NS
Psoriasis	182	25.3	NS	-
Control	96	19.6	p<0.05	p<0.05

Table 6: Turkey test results for mean LES adjustment scores, NS: Not Significant, SD: Standard deviation

Variable	Mean	SD	Alopecia areata	Psoriasis
Alopesia areata	204,710	28,974	-	NS
Psoriasis	241.039	22,814	NS	-
Control	108,220	25,194	p<0.05	p<0.05

Table 7: Turkey test results for mean LES distress scores, NS: Not Significant, SD: Standard deviation

CIDI		AA (N=41)	Psoriasis(N=31)	Control(N=50)	Total(N=122)
None	N	17	15	50	82
	(%)	41,5%	48,4%	100,0%	67,2%
Active depression	N	3	2	-	5
	(%)	7,3%	6,5%	-	4,1%
Active anxiety	N	2	2	-	4
	(%)	4,9%	6,5%	-	3,3%
Active depression and anxiety	N	12	3	-	15
	(%)	29,3%	9,7%	-	12,3%
Previous depression	N	7	5	-	12
	(%)	17,1%	16,1%	-	9,8%
Previous anxiety	N	-	2	-	2
	(%)	-	6,5%	-	1,6%
Previous depression and anxiety	N	-	2	-	2
	(%)	-	6,5%	-	1,6%
Total	N	41	31	50	122
	(%)	100,0%	100,0%	100,0%	100,0%

Table 8: Comparison of the groups with CIDI for the diagnosis of depression and anxiety AA: Alopecia areata

Discussion

Psychosocial effects of chronic skin disorders have been ignored partially until now. These patients may have a better quality of life if psychiatric co morbidity is defined in a better way and treated appropriately [18]. There are lots of studies about childhood traumatic events which may play a role in dermatological problems. However, this condition has not been investigated in AA patients. Our study's results suggested that childhood traumatic events were significantly more often seen in AA patients compared to healthy control group. This may be related to immunologic mechanisms which may be a cause for AA (19-20) and trauma which may trigger conflict that appears in the form of AA.

Childhood traumas remained as a subject that isn't researched much in AA. Whereas the post-traumatic difficulties in expressing the emotions and having relationships with others and reasons like the lack of social support affect negatively the people's ability to cope stressful life events. By determining the possible psychiatric co morbidity, if the patients can be treated with a biopsychosocial approach it could provide a really positive contribution to the lives of

patients. In this study, childhood traumatic events were higher in AA patients compared to psoriasis patients, but statistical significance was not found. These findings may imply childhood traumatic events also may play a role in the etiology of psychodermatosis. The difference of our study compared to previous reports on the AA and childhood traumas did not include other dermatosis as a control group, and these studies did not answer the questions if these findings were peculiar to AA patients only. Earlier studies with AA and psoriasis related to previous life events only included life events which occurred in the last one year of the disease, but not the childhood traumatic events. Willemsen and co-workers [4] found that the numbers of life-time and childhood traumatic events were higher compared to healthy controls, but they did not investigate any other dermatosis as a control group. It is debatable that these findings are particular to AA.

The difference between the mean score of people in Alopecia Areata and psoriasis group is higher but insignificant in AA group. This may indicate that the negative effects of childhood traumas also may have a role in the etiology of other psychodermatoses. It's remarkable that there is no another skin disease in use as control group in any of the limited number of studies about the AA and childhood traumas

before. So, the question of whether the findings are specific to disease could not be answered. Childhood traumatic events are not peculiar to AA and childhood trauma may play a role in the pathogenesis of other dermatosis like psoriasis according to our hypothesis. Our findings supported our hypothesis. Because stressful events during childhood had an effect on the occurrence of dermatosis. Previous studies with vitiligo, lichen planus, acne vulgaris, pemphigus, and seborrheic dermatitis are controversial. The role of recent stressful life events in the pathogenesis of psoriasis, AA, atopic dermatitis, and urticaria are more prominent [3]. Only few studies meet the standard methodology. However, our study had a strong study design. Stressful lifetime events may play a major role in the pathogenesis of dermatologic disorders. In our study, childhood traumas and life events distress scores were statistically higher in psoriasis and AA groups compared to healthy individuals.

The effects of lifetime events are controversial in previous studies with the children, and as a control group only healthy individuals are included. Reeve et al found no relation between lifetime events and AA in 12 children [21]. Liakopoulou interestingly did not find any increase in negative lifetime events in children with AA compared to control group, instead there was lack of positive lifetime events [22]. In their study negative lifetime events consisted of trauma, but in our study Childhood Trauma Questionnaire included questions consisting of lackness of positive lifetime events, the difference between 2 studies might be related to this reality. In a different study, stressful lifetime events played a role in 65% of AA patients. The results of these previous studies were in concordance with our current study.

Stressful life events play a role in the etiology of AA, but this effect is not particular to AA. Previous studies [24-27] investigated stressful life events within last 1 year in AA patients, and the results were statistically significantly more often compared to control group. But, in these studies control group consisted of healthy individuals or patients with other dermatitis. Russiello et al. [28] and Paga et. al. [29] found no difference in stressful life events between AA patients and control groups, but Russiello chose patients with pigmented nevus or keratosis as a control group, and Paga included only 18 women with AA. The reason for the difference in our study might have been attributed to included male and female with AA with a concordance of the frequency. Capoore et al. found 69% of patients with chronic skin disorders with resistance to therapy had an important life event at the time of their disease [30]. Al Abadie et al. [31] found that psychological stress increases neuroendocrine hormone levels, and as a result immune system was affected and neuropeptide levels were changed. Increase in neuropeptide levels might be the initiative effect in the pathogenesis of AA [31]. By observing negative life events, Gaston et.al.[32] showed psychological stress caused redness of the skin and proved the relationship between psychological stress and difficulties. The lack of life events in the pathogenesis of psoriasis, AA, atopic dermatitis, and urticaria might be attributed to small size of the study group, and these studies are mostly retrograde studies. Our study was different from the above-stated studies because it was prospective; control group consisted of psoriasis patients and healthy individuals, and with a control group of exact number of study subjects. In addition, we investigated stressful life events, childhood traumas, and anxiety and depression concurrently.

When we look at the previous studies for the severity of depression and anxiety, the results are not clear as the diagnosis of depression and anxiety. Severity of anxiety and depression were higher than the control group in their study groups. On the other hand, , Güleç et al.

[2], Yazıcı et al. [19] did not observe any difference for anxiety and depression levels between the control and study groups. This difference may be attributed to scales used in the studies, and to the inadequate number of study objects for statistical purposes. Since previous studies for comparing AA and psoriasis for the severity of anxiety and depression are limited. We were not able to compare our results with previous studies for comparing the severity of anxiety and depression in AA and psoriasis groups.

Previous studies with AA patients showed a wide spectrum of psychiatric disorders. In a study, Colon [35] found 39% major depression and 39% anxiety disorder in AA patients. Fernando et al. [36] found psychiatric symptoms in 77% of AA patients. Another study by Taskintuna et al. [2] showed that the rate of depression and anxiety disorders were similar in AA and control group whereas stressful life events were more often in AA. Stressful life events and trauma may initiate depression, anxiety or various psychiatric disorders; as a result it has been a matter of question whether these patients' higher depression or anxiety scores were related to AA itself or to stressful life events or childhood trauma. There are new studies telling us that Alopecia areata is associated with poor psychiatric status and quality of life, especially in childhood. The impact of the disease on quality of life occurs through both clinical and psychiatric parameters. Also we know psoriasis markedly worsens the global well-being of patients and their cohabitants, who experienced an impairment of their quality of life and higher levels of anxiety and depression.

The difference of our study from the previous studies was that we compared depression and anxiety disorder in AA patients with healthy controls as well as with the psoriasis group as a control group. This was the strength of our study. In addition, we compared all three groups, AA, psoriasis, and healthy controls with each other as well as between AA and psoriasis groups.

To the limitations of our study

Although our study has got enough samples, having higher numbers could increase the power of research. Another limitation, because of the cultural and religious variables of our country it was difficult to compare, especially in the female patients, due to the place of the lesions appears and changing levels of discomfort. In the patients who have cover for religious reasons, psoriasis in the arms was placed in unseen areas, or the AA in the hair; but the other patients who haven not the same religious clothing, lesions were able to be seen. Naturally, the invisible lesions were both less uncomfortable and disturbing self image for those patients.

Results and Suggestions

In our study, AA patients were compared in terms of psoriasis patients and healthy control groups, socio-demographic characteristics and severity of anxiety and depression, childhood traumas and life events. All of these variables were significantly higher in AA group, than the healthy control group besides there was no detected significant differences between psoriasis groups. In AA, psoriasis and possibly in other skin diseases, symptoms of anxiety and depression are quite common and interdisciplinary treatment (psychiatry and dermatology) was seen as a necessity for patients to have more benefits from the treatment and for the reduction of recurrence of disease. To ensure that, providing widespread of psycho-dermatology clinics and developing as a separate side branch should be supported.

The aim of this study is indicating that the psychiatric disorders may have a major role in dermatologic diseases, for the correction of diagnosis and effectiveness of the treatment, the mental illness history of the patient should be considered. The future studies in this area should be directed to research if the childhood traumas and stressful life events are valid for other psychosomatic diseases like peptic ulcer, neudermatitis, migraine, fibromyalgia, hives, vitiligo, asthma. This also will help us to understand more about the role of the spiritual events in the past and present, in the etiology of pathology.

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