Original Article

The Impact of Coping Strategies in Behcet's Disease: A Case-control Study

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Abstract

Background: Behcet's disease (BD) is a chronic, systemic inflammatory disease characterized with higher prevalence of psychiatric disorders, particularly major depression. This study aimed to determine the relationship between the psychological coping strategies with the disease and depression, anxiety, quality of life and disease activity in patients with BD. **Methods:** Fifty Behcet's patients and 38 control subjects were compared by using Behcet's disease current activity form (BDCAF), quality of life instrument (QOL), structured clinical interview for DSM-IV axis I disorders (SCID-I), ways of coping questionnaire (WCQ), Beck depression inventory (BDI), and Beck anxiety inventory (BAI). **Results:** In terms of coping, self-controlling and positive reappraisal scores were lower in BD patients than controls while escape-avoidance was negatively correlated with age in patients. Confrontive coping, accepting responsibility, and escape-avoidance scores were positively correlated with BDI and BAI. Confrontive coping, accepting responsibility, and planful problem solving were positively correlated with QOL score. Multiple linear regression analysis indicated that confrontative coping was the major predictive factor for QOL and BDI scores. **Conclusions:** Excessive use of confrontive coping, accepting responsibility, and escape-avoidance strategies seems to increase depression and anxiety in Behcet's patients. Besides, among those strategies, confrontive coping is significantly associated with depression and quality of life in BD patients that should be considered in therapeutic approaches. Our results highlighted that Behcet's patients have different coping strategies than healthy controls that may impair the psychological adjustment process.

Keywords: *Anxiety, Behcet's Disease, Coping skills, depression, quality of life*

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Introduction

Behcet's disease (BD) is a chronic, progressive multisystemic disorder characterized with common manifestations including oral/genital ulcers, skin lesions, and systemic manifestations including gastrointestinal, musculoskeletal, neurological, ophthalmic, and vascular involvements.[1,2] The chronicity features of the disease as well as the functional disability cause activity limitations that affect the patient's daily life and lead disturbances in psychological well-being.[3] Chronic medical conditions are known to be associated with psychiatric disorders particularly related to mood, anxiety, and substance use disorders.[4] Likewise, many studies about the psychological effects of BD are emphasizing about depression, anxiety, and quality of life.[5] Major depression prevalence was reported as about 20% in BD patients at the time of clinical evaluation.[6] In a study, 69.3% of the BD patients revealed different levels of psychiatric symptoms; somatization, anxiety, and depression were found as the most prevalent symptoms.[7] In another study comparing BD with psoriasis, BD patients had higher levels of psychopathology than did psoriasis patients in terms of

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psychological test scores and the duration of the illness was found as the major risk factor for the development of depression in BD patients.[8]

Coping strategies are very important in the psychological adjustment process of chronic diseases, especially to prevent psychiatric disorders like depression. Coping as a process is defined as the cognitive and behavioral efforts to manage psychological stress.[9] There are two types of coping strategies: problem and emotion focused coping. Problem-focused strategies focus on changing aspects of the environment and the person's relationship. In other words, people using problem-focused strategies try to deal with the cause of their problem and aim to change or eliminate the source of stress. Emotion-focused strategies focus on emotional responses to the stressors. This type of coping aims to alleviate the distress by minimizing, reducing, or preventing the emotional components of a stressor. People may change the meaning of the stressor or transfer attention away from it by using emotion-focused strategies.[10]

Among problem-focused strategies, confrontive coping and planful problem solving, and among emotion-focused strategies, positive reappraisal (reappraising the stressor in a positive light) and seeking social support are defined as active coping styles. Distancing, self-controlling, accepting responsibility, and escape-avoidance are the other components of emotion-focused strategies, which are mentioned as avoidant strategies.[9,11] Preferring active or passive (avoidant) coping styles are important factors in patient's adjustment process, especially for chronic diseases. The use of more passive and less active coping strategies has been shown to be associated with higher levels of depressive symptoms in patients with chronic illnesses. It is known that inadequate or dysfunctional coping strategies may lead to psychiatric disorders like depression and anxiety disorders, and also impair the patient's quality of life.[12-14] In other words, greater use of active coping processes, like planful problem-solving, seeking social support, and positive reappraisal is associated with a higher quality of life and less depressive symptoms, while greater use of passive styles as escape-avoidance, self-controlling, and distancing is negatively related to well-being.[11,15]

Patients with chronic diseases use several types of coping strategies that may also change over time. In this respect, we aimed to determine the effects of coping strategies on depression, anxiety and disease activity in BD patients. To our knowledge, the present study is the first case-control study determining the consequences of coping styles in BD patients.

Methods

Participants

A total of 50 Behcet's patients who were admitted to the outpatient clinic of the dermatology department and age, sex, and educational level matched 38 healthy controls those over the age of 18 were included in the study. Patients with known other dermatological diseases, systemic disorders (i.e. diabetes mellitus, hypertension), mental retardation, serious psychiatric disorders including dementia, obsessive-compulsive disorder, psychotic disorders and patients with neurological involvement were excluded from the study. A written informed consent form was given to all patients and controls who accepted to participate in the study. Suleyman Demirel University ethics committee approved the study.

Measures

The diagnosis of BD was performed according to the international study group criteria. BD activity was calculated according to the Behcet's disease current activity form (BDCAF).[16] Quality of life (QOL) instrument developed by Gurel *et al*.[17] for skin diseases was used to determine the quality of life in Behçet patients. According to the QOL instrument, the quality of life worsens as the score gets higher. A psychiatrist performed the psychiatric evaluations of the patients. All patients and controls were determined using the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), ways of coping questionnaire, Beck depression inventory, and Beck anxiety inventory.[18-21]

Ways of coping questionnaire (WCQ)

The WCQ is a Likert type scale that assesses the coping strategies used by the individual when confronted by stressors.[19] WCQ is a 66-item self-report questionnaire including coping and behavioral strategies that people may use to manage internal or external demands of stressful situations.[22] Responses are rated on a four-point Likert scale (0 = not used, 3 = used a great deal) ranging from 1 (I never do that) to 5 (I do it always). The WCQ comprises eight subscales as: confrontive coping (6 items), distancing (6 items), self-controlling (7 items), seeking social support (6 items), accepting responsibility (4 items), escape-avoidance (8 items), planful problem-solving (6 items), and positive reappraisal (7 items).[23] Problem-focused coping item includes the subscales as planful problem-solving and confrontive coping, which are described as efforts to alter the situation. Emotion-focused coping includes: distancing, self-controlling, accepting responsibility, escape-avoidance, seeking social support, and positive reappraisal. Higher scores indicate which method is more

widely used by the participant in a stressful condition. The WCQ has been used in clinical and nonclinical samples indicating good reliability and validity.[24,25]

Beck Depression Inventory (BDI): Beck depression inventory (BDI) is a self-report inventory that measures the severity of depression.[20] BDI includes 21 items scored between 0 and 3. The Turkish version was validated by Hisli.[26]

Beck Anxiety Inventory (BAI): Beck ANXIETY INVENTORY (BAI) is a self-report inventory consisting of 21-items scored between 0 and 3 that measures the frequency of physiological and other symptoms of anxiety experienced during the previous week.[21] The Turkish version was validated by Ulusoy *et al*.[27]

Statistical analyses

Statistical analyses were performed using the SPSS software version 22.0 (SPSS Inc., Chicago, IL, USA). The variables were investigated using visual (histograms, probability plots) and analytical methods (Kolmogorov-Smirnov/Shapiro-Wilk's test) to determine whether or not they were normally distributed. Variables were expressed with mean ± standart deviation. Continuous variables between two groups were compared with Independent-t test. Chi-square test was performed for qualitative variables. The relationship between the parameters was assessed by using Pearson's correlation and analysis. Multiple linear regression analysis was used to assess independent associations between the variables. The calculated P value < 0.05 was considered as statistically significant.

Results

Clinical characteristics of the study subjects

A total of 50 patients with BD diagnosed for more than 6 months and age, gender, and educational level matched 38 healthy controls participated in the study. There was no significant difference between the two groups in terms of gender, age, and educational level. The score of QOL was higher in Behcet's group than controls (P < 0.001) [Table 1].

The comparison of the WCQ in cases and controls

The mean scores of self-controlling and positive reappraisal were significantly lower in Behcet's patients compared to healthy controls, whereas the mean scores of other subscales of WCQ were not statistically different between the cases and the controls [Table 2].

Correlations between WCQ and Age, BAI, BDI, Duration of the Disease, and QOL in Behcet's Patients

Escape-Avoidance score was negatively correlated with age in patients, whereas escape-avoidance was not correlated with age in controls. Escape-avoidance, confrontive coping, distancing, and accepting responsibility were positively correlated with BAI. Escape-avoidance, confrontive coping, and accepting responsibility were positively correlated with BDI. Confrontive coping was positively and escape-avoidance was negatively correlated with disease duration. Escape-avoidance, confrontive coping, and accepting responsibility were positively correlated with QOL score [Table 3].

Correlations of BAI and BDI scores with QOL, Disease activity, and Duration of the Disease

BAI was positively correlated with QOL score (r: 0.646, P: 0.000) and disease activity (r: 0.348, P: 0.013). BDI was positively correlated with QOL score (r: 0.642, P: 0.000), disease activity (r: 0.293, P: 0.039), and the duration of the disease (r: 0.326, P: 0.021).

Multiple linear regression analysis of variables

Escape-avoidance, confrontive coping, and accepting responsibility, which were statistically correlated to

Table 1: Descriptive and Clinical Characteristics of Cases and Controls

	Cases (n: 50)	Controls (n: 38)	P
Sex F/M, n (%)	29 (58%)/21 (42%)	24 (63.2%)/14 (36.8%)	0.624
Age, mean±sd	36.66±10.94	33.66±10.30	0.195
Duration of disease, years, mean±sd	8.00±7.17	-	-
Disease activity, mean±sd	3.96±2.11	-	-
QOL, mean±sd	13.16±9.39	0.81±1.31	*0.000

*P<0.001. QOL: Quality of Life

Table 2: Comparison of WCQ in Cases and Controls

	Group	Mean±sd	P
Confrontive Coping	Cases	6.54±3.59	0.436
	Controls	7.15±3.76	
Distancing	Cases	8.36±2.78	0.238
	Controls	9.28±4.52	
Self-controlling	Cases	8.86±3.21	*0.008
	Controls	11.23±4.93	
Seeking Social Support	Cases	7.88±3.99	0.961
	Controls	7.92±3.80	
Accepting Responsibility	Cases	6.44±2.53	0.665
	Controls	6.18±2.97	
Escape-avoidance	Cases	8.24±4.12	0.509
	Controls	8.84±4.35	
Planful Problem-solving	Cases	9.06±3.68	0.799
	Controls	8.81±5.28	
Positive Reappraisal	Cases	8.22±4.08	*0.005
	Controls	10.89±4.67	

*P<0.05.WCQ: Ways of Coping Questionnaire

Table 3: Correlation Coefficients Between Coping WCQ and Age, BAI, BDI, Duration of the Disease, and QOL score

	Age (r-value)	BAI (r-value)	BDI (r-value)	QOL (r-value)	Duration of the disease (r-value)
Escape-avoidance	*-0.361	*0.316	*0.363	*0.320	*-0.302
Confrontive Coping	-	*0.324	**0.386	***0.502	*0.290
Distancing	-	*0.304	-	-	-
Accepting responsibilities	-	*0.291	*0.290	*0.295	-

*P<0.05 **P<0.01 ***P<0.001.BAI: Beck anxiety ınventory, BDI: Beck depression ınventory, QOL: Quality of life

Table 4: Multiple linear regression analyses associated with QOL in Behçet's patients

Independent variables	Standart regression coefficients (β)
	QOL
Escape-avoidance	0.155
Confrontive coping	0.454**
Accepting responsibility	0.033
R^2 (multiple coefficient of determination)	**0.279

*P<0.05 **P<0.01 QOL: Quality of life

Table 5: Multiple linear regression analyses associated with BDI in Behçet's patients

Independent variables	Standart regression coefficients (β)
	BDI
Confrontive coping	*0.308
Accepting responsibilities	0.039
Escape-avoidance	0.280
R^2 (multiple coefficient of determination)	**0.007

*P<0.05 **P<0.001 BDI: Beck depression ınventory

QOL, were considered for multiple regression analysis. Multiple linear regression analysis indicated that confrontive coping was the major predictive factor for QOL [Table 4].

Escape-avoidance, confrontive coping, and accepting responsibility, which were statistically correlated to BDI, were considered for multiple regression analysis. The major predictive factor for Beck depression score was confrontive coping [Table 5].

Discussion

Coping strategies have crucial importance during the adjustment process to BD. Inappropriate strategies are known to predispose depression, anxiety, and worse quality of life as mentioned before in other chronic diseases like MS and dermatological patients.[28-30] Therefore, in this study, we aimed to determine the effects of coping styles for Behcet's patients in terms of depression, anxiety, quality of life, disease duration, and disease activity.

We found that positive reappraisal and self-controlling scores were lower in Behcet's patients than in controls. Positive reappraisal is an active coping style, which is known as an adaptive mechanism protecting from psychological distress rather than avoidant styles.[31] Also, in positive reappraisal, the stressful situation is reconstructed as beneficial, benign, or valuable. Researchers have demonstrated that the ability to find benefit from adversity is associated with improved health outcomes.[32-35] Positive reappraisal is a beneficial style in many chronic medical conditions like breast cancer, cardiac disorders, and amyotrophic lateral sclerosis.[36-38] In our study, Behcet's patients, which is also a chronic condition, were using positive reappraisal less than the controls which may impair the adjustment process to the disease. Another subscale, which was lower in BD patients, was self-controlling. Self-controlling is defined as efforts to regulate one's own emotions, thoughts, and behavior.[22] Therefore, when coping with chronic diseases, lower self-control as we found in BD patients, may cause problems in impulse control or anger management.

Depression and anxiety are the most common psychiatric disorders in patients with BD.[8,39,40] In our study, in line with the previous studies, depression, anxiety, and poor quality of life were positively related to disease activity and duration of the disease.[5,41] In other words, as the duration and severity of the disease increase, patients become more depressive and anxious rather than more "adaptive."

In our study, it was found that using escape-avoidance and accepting responsibility strategies lead an increase in depression and anxiety symptoms. Also, distancing was positively associated with anxiety in patients. It is known that escape-avoidance is a kind of thinking and behavioral effort to escape or avoid a stressful situation. In other words, patients may not talk about their disease or may not even seek help in order to avoid. In concordance with escape-avoidance, distancing is also known as a cognitive detachment that patients "go on as if nothing happened." Besides, accepting responsibility, which is an also passive coping style, is described as acknowledges one's own role in the problem with a concomitant theme of trying to put things right. Accepting responsibility also lowers the

quality of life while raising depression and anxiety symptoms. Eventually, escape avoidance, accepting responsibility, and distancing are all among passive coping approaches those were related to depression and anxiety in BD patients in our study. Our results are in accordance with the findings that more passive and less active coping strategies are associated with higher levels of depressive symptoms in patients with chronic illnesses.[33,42,43] Mohr *et al*.[44] and Lynch *et al*.[45] have shown that passive or emotion-focused coping styles are related with depressive symptomatology in multiple sclerosis (MS) which is a disease associated with chronicity, relapsing-remitting course, multisystem involvement, and unpredictable clinical process, as in BD. In cases where the stressor can be controlled, more problem-focused coping methods are used, which leads to fewer psychological problems. But stressors, which are perceived to be less controllable like in BD and MS, patients, are more likely to use emotion-focused and passive coping styles that may affect the well-being of the patient.[11] In order to prevent BD patients from depression and anxiety, clinicians have to be more informative to patients about the disease that has an unpredictable course. Establishing a better relationship with patients may decrease avoidant coping styles.

In our study, confrontive coping style was significantly increasing depression and anxiety, and also was related to worse quality of life in BD patients. It was remarkable that although confrontive coping was classified as an active coping style, it was the strongest predictive factor for depression and poor quality of life in our patients. In the literature, confrontive coping was defined as aggressive efforts to change the situation. Besides, this kind of strategy may lead to some degree of hostility and risky behaviors and patients may have difficulties to control their emotions. In confrontive coping, the main emotion is anger. Patients may blame someone, something or themselves that may cause treatment incompatibility. Therefore, based on our findings, less use of confrontive coping strategy may decrease anger and depressive symptoms in BD patients that should be considered in therapeutic approaches.

In terms of coping strategies and disease duration, confrontive coping and depression increased while escape-avoidance was decreasing over the years. In other words, patients do not avoid the problems caused by the disease over time. The clarification of the disease process and being more experienced about the illness may be related to less avoidance. However, we found that confrontive coping style is still a risk factor for depression and lower quality of life even after years.

One of the limitations of our study is the sample size that BD is specific to regions, which limits the number of patients. Besides, the assessment of coping strategies was based on a self-reporting questionnaire. Nevertheless, a detailed assessment of the coping strategies in BD patients in terms of depression, anxiety, disease duration, and quality of life for the first time is the major strength of our study.

In conclusion, this study suggests that BD patients have different coping strategies than healthy controls. Passive coping styles increase depressive symptoms with anxiety and impair the quality of life similar to other chronic disorders. Anxiety and depression are increasing with poor quality of life and disease activity. Disease duration is also related to depressive symptomatology. However, among all coping styles, confrontive coping is the strongest predictive factor for depression and poor quality of life in patients with BD although it is an active style. Further longitudinal studies investigating different therapeutic approaches in BD patients would provide more informative data.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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