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Depression and Anxiety in Iranian Patients with Behcet's Disease: A Single Center Experience

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Abstract

Background: This study was designed to determine and compare the stress, anxiety and depression levels in Behcet's disease (BD) patients and a control group of normal individuals. **Materials and Methods:** One-hundred and six patients with BD were selected as cases and controls were 106 age- and sex-matched participants referred to the Shiraz Dental school clinics due to dental problems. We collected the information with 3 validated Farsi questionnaires: Perceived Stress Scale (PSS) for stress, Beck Anxiety Index (BDI) for depression and Beck Depression Index (BAI) for anxiety. **Results:** Stress, depression and anxiety levels were significantly higher in patients with BD in comparison with the control group (P<0.001).**Conclusions:** A high level of stress and depression in BD patients is frequent and PSS, BDI and BAI are useful for determining these variations. Finally, we suggest a psychiatrist consultation in all periods of disease treatment.**[GMJ. 2013;2(3):100-105]**

Keywords: Behcet`s Disease; Anxiety; Stress; Depression; Iran

Introduction

Behcet disease (BD), sometimes called Behcet syndrome, is a chronic inflammatory disease with an undefined origin. According to the International Study Group criteria for diagnosing BD, the presence of recurrent oral ulcers plus two of the following symptoms are required: skin lesions (papulopustular lesions, erythema nodosum, or acneiform nodules), eye lesions (retinal vasculitis or uveitis), recurrent genital ulcerations, or a positive pathergy test, in the absence of other systemic diseases [1]. Ocular involvement such as uveitis is frequent, severe and often bilateral and rapidly involves the visual function [2,3]. Involvement of the joints is a common manifestation, affecting joints such as the knees, ankles, wrists, and elbows [4].

Cardiovascular involvement is also seen and may involve the three tunics [5].In an epidemiological study, psychosomatic symptoms like stress and depression were reported in 86 percent of patients after disease diagnosis

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and there was an association between BD and organic defects or corticosteroid usage [6,7]. According to the stimulatory effects of intensive stress on the immune system, stress is assumed to have a prominent role in disease recurrence and continuance [8]. In a Turkish study, levels of psychopathology were compared between the BD and psoriasis patients and the duration of illness was a major risk factor for development of depression in BD patients. Therefore, they showed the need for an early recognition of psychiatric symptoms in patients with BD [9].

On the other hand, some researchers found that a traumatic events in one`s personal life has a prominent effect on both the remission period and relapse of BD [10].

Calikoglu`s study showed that, there had been a stress factor before the disease onset or its recurrence in the majority of BD patients. Also, more anxiety, depression and lower quality of life have been reported in BD patients versus cutaneous psoriasis ones [11]. Most of the patients with chronic disorders have to cope with depression and this strongly affects the quality of their lives [12]. In this study, we aimed to determine the level of stress, anxiety and depression in BD patients in an Iranian population.

Materials and Methods

This cross-sectional study was carried out in the Department of Oral Medicine, school of Dentistry, Shiraz, southern Iran, from January 2010 to May 2011. All patients fully met the International Study Group (ISG) criteria for Behçet's disease [13]. All equivocal cases with clinical or paraclinical findings consistent with any entity other than Behçet's disease were excluded. An age- and sex-matched control group was selected from the patients referring to the Dentistry school due to dental problems who also did not have BD or oral ulcers. Patients with oral ulcer, with a history of family stress or systemic cortisone drugs consumerism, antidepressants drug users, and those under a psychiatrist following were excluded from our study.

Based on the previous studies and by using the statistical software, PASS, we determined 106 patients as the case group and 106 patient as the controls (α=0.05, β=0.2). After the determination of the sample size, we randomly selected the patients from the records of the BD clinics and invited them, by phone call, to participate in our study.

Depression, anxiety and stress levels in both case and control groups were measured with 3 validated Persian-translated questionnaires [14]. The first one was Perceived Stress Scale (PSS) to investigate stress in two groups; the other two being Beck Anxiety Index (BAI) and Beck Depression Index (BDI) to determine anxiety and depression levels in the two groups, respectively. The study was approved by the Ethics Committee of Shiraz University of Medical Sciences and all participants signed a written informed consent. The protocol of the study was approved by the Institutional Review Board of the University.

Statistical analysis

All the statistical analysis was performed using the Statistical Package for Social Sciences (SPSS), version 15.0 (SPSS Inc., Chicago, IL). Descriptive results are presented as mean value ± standard deviation (SD) for 95% confidence interval with or without proportions. Chi-square test was used to compare the non-parametric data, including the educational level and occupation. Independent-samples t-test was used to compare the parametric data including age, depression, anxiety and stress levels between the two groups.

Results

Overall, we enrolled 106 BD patients (mean age: 37.2 ± 12.3 years; 29 [27.4%] males) in the case group and 106 patients (mean age: 35.5 ± 6.8 years; 39 [36.8%] males) as controls. Demographic characteristics of the patients and controls are summarized in Table-1. There was no significant difference between the two groups regarding age, gender, educational level, type of occupation, and other demographic features.

Results of the stress, anxiety, and depression questionnaires are described in Table-2. Stress, anxiety and depression levels were significantly higher in patients with BD as com-

pared to the control group (P=0.00). These significant differences were also observed within the gender subgroups.

In the BD patients, there was no correlation between the stress and gender; however, we found that in this group, depression and anxiety were significantly higher in women (P= 0.04 and P= 0.01, respectively). Despite the results shown above, there was no correlation between the stress, anxiety and depression with gender in the controls. As shown in Table-3, living in urban or rural areas had no significant correlation with stress, anxiety and depression levels in the two groups.

Discussion

There are many reports on the clinical manifestations of BD from different parts of the world [15-17]. In our study, we investigated stress, anxiety, and depression levels in BD patients with oral ulcers with the PSS, BAI and BDI questionnaires and found that these three psychiatric manifestations are significantly higher in BD patients compared to the control group. This may suggest that having a high level of stress and depression can cause oral ulcers in BD patients.

In the same case-control study performed by Karlidag and his colleagues in Turkey, anxiety, depression and stress in life were respectively measured using the BAI, Hamilton (HAM-D) and Toronto Alexithymia Scale (TAS) questionnaires in BD patients versus a control group. They reported that these three factors were significantly higher in the BD patients in comparison with the controls (TAS, P<0.05; HAM-D, P<0.001; BAI, P<0.001) [8].

Table 1. Demographic characteristics of the patients (Case group) and the control group.

	Case Group (n=106)	Control Group (n=106)	P-value
Age (years)	37.2 ± 12.3	35.5 ± 6.8	0.121
Sex			
Male (%)	77 (72.6%)	67 (63.2%)	0.089
Female (%)	29 (27.4%)	39 (36.8%)	
Residence			
Urban (%)	61(57.5%)	30 (28.3%)	0.002
Rural (%)	45 (42.5%)	76 (71.7%)	

Table 2. The Scores of Stress, Anxiety and Depression in the Cases and Control Group.

Psychiatric Manifestation	Group	Oral lesion	N	Mean	Std. Deviation	P-value
Stress	Case	1	106	20.66	5.15	< 0.001
	Control	0	106	16.26	5.55	
Anxiety	Case	1	106	22.15	12.08	< 0.001
	Control	0	106	12.33	9.95	
Depression	Case	1	106	18.76	11.01	< 0.001
	Control	0	106	9.06	6.6	

Table 3. The Correlation Between Stress, Anxiety and Depression Levels and Living in Urban or Rural Areas.

Group		Living area	N	Mean	P-value
Case	Stress	1	45	20.51	0.78
		2	61	20.78	
	Anxiety	1	45	21.68	0.73
		2	61	22.49	
	Depression	1	45	17.42	0.28
		2	61	19.75	
Control	Stress	1	76	15.28	0.64
		2	30	18.73	
	Anxiety	1	76	11.57	0.21
		2	30	14.23	
	Depression	1	76	8.44	0.12
		2	30	10.63	

Living area: 1 = urban, 2 = rural

Tanner et al compared anxiety and depression in 112 BD and 95 psoriasis patients, and reported significantly higher levels of both factors in BD patients in comparison to the psoriatic ones, (P<0.001) [18].

Calikoglu et al performed another case-control study in 2001. They surveyed anxiety, depression and psychological history in BD patients and compared their results with controls in order to find significant differences. Depression levels in the patients and control groups were 11.96±6.93 and 9.11±7.34, respectively. Anxiety level was significantly higher in the cases too [11].

Gur et al investigated the correlation between disease severity and depression, anxiety and quality of life levels in BD patients in comparison with control groups. They used BDI, STAI-T and QOL questionnaires to measure these factors and concluded that these are significantly high in patients (P<0.001) [4]. Some other studies have provided a strong basis regarding the role of psychosocial factors on the course of rheumatic diseases. The fact that the interaction between physical and psychological factors can be responsible for the concomitant experience of a disease such as BD and rheumatoid arthritis (RA) has been previously demonstrated [19-22].

Melikoglu and Melikoglu attempted to find the relationship between disease activity and depression in patients with BD and RA. Their aim was to determine depression levels in patients with BD and patients with RA separately and then compare them.

They investigated the disease activity and depression using Disease Current Activity Form (BDCAF) and BDI, respectively. They concluded that there was strong correlations between the depression level, disease activi-

ty and joint involvements in BD patients and also found that depression is significantly higher in these patients in comparison with the RA ones [23].

Reduced life quality is an inevitable matter in most diseases and disorders as it can also be seen in BD patients [24].

In a comparative study, Ugaz et al concluded that depression has a negative influence on the quality of life in BD patients, but there was no significant correlation between the severity of depression manifestations and the patient's quality of life [25].

In conclusion, our study adds evidence that stress, anxiety and depression are significantly high in BD patients. We suggest that psychologist consultation in the course of the disease could be beneficial and help improve the quality of life in the BD patients.

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Disclosures

None of the authors declare any conflict of interest.

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