

Psychometric Evaluation of Patients with Behçet's Disease

A. Borhani Haghighi, E. Aflaki¹,
H. Haghsheenas², S. Savagheb³,
S. Davoodi³

Abstract

Behçet's disease is a vasculitis with multi-organ involvement. Our knowledge of the psychological aspects of Behçet's disease is very limited. 40 women and 24 men who fulfilled the International Study Group (ISG) criteria of Behçet's disease were selected from Behçet's Disease Clinic of Nemazee Hospital Shiraz, South of Iran. Controls consisted of 65 healthy volunteers. Both patients and controls completed SCL-90R questionnaire. Scores of somatization, obsessive-compulsive behavior, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideations and psychoticism were compared between cases and controls. Patients with Behçet's disease had significantly ($P=0.04$) higher global severity index of SCL-90R in comparison to controls. The patient group also had significantly higher scores for aggression ($P=0.03$), anxiety ($P=0.04$) and somatization ($p=0.00$) than controls. It is concluded that SCL-90R is a useful tool for evaluation of the psychiatric status of patients with Behçet's disease.

Iran J Med Sci 2007; 32(2): 110-113.

Keywords • Behçet's disease • psychiatry • Iran

Introduction

Behçet's disease is a multi-system inflammatory disorder with a chronic course. Its cause is still unknown but vasculitis may be the major etiology.

Recurrent oral and genital ulcers, uveitis, erythema nodosum, arthritis, superficial and deep thrombophlebitis and gastrointestinal, cardiac, pulmonary and neurological symptoms are the main manifestations of Behçet's disease.

Since the Behçet's disease is a Chronic and sometimes crippling disease, it may induce some psychological distress in affected patients. In spite of widespread research on Behçet's disease, only a few studies have been performed on neuropsychiatric aspects of Behçet's disease.¹

Symptom check list 90-R (SCL-90R) is a self-rating questionnaire to determine the state of psychological distress and is designed to evaluate some emotional and behavioral symptoms.²

We conducted this study to evaluate the psychometric status of patients with Behçet's disease using SCL-90R.

Patients and Methods

This cross-sectional study was carried out in Behçet's Disease Out-Patient Clinic of Nemazee Hospital, Shiraz, southern Iran, from March 2003 to March 2004. Every fourth patient who referred to this clinic was recruited for the study. All of these patients fully met the International Study Group (ISG) criteria for

Department of Neurology,
Gastroenterohepatology Research Center,
¹Rheumatology,
Autoimmune Disease Research Center,
²Psychiatry, Psychiatry research center,
³Student Research Committee,
Shiraz University of Medical Sciences,
Shiraz, Iran.

Correspondence:

Afshin Borhani Haghighi MD,
Department of Neurology,
Nemazee Hospital,
Shiraz, Iran.
Tel/Fax: +98 711 6261089
Email: borhanihaghighi@yahoo.com

Behçet's disease. All equivocal cases with clinical or paraclinical findings consistent with any entity other than Behçet's disease were excluded. All subjects gave an informed written consent for participation in the study.

All patients were questioned about age, gender, level of education, duration of disease (measured since the time of diagnosis by medical professionals), drug history and different manifestations of Behçet's disease. Data were completed by review of clinical records. Age-, gender- and education-matched healthy volunteers (without any medical, surgical or psychiatric diseases) were selected as control (comparison) group.

SCL-90R asks patients to rate the severity of their distress over the previous seven days by giving a score between zero (no distress) and four (extremely high distress) to some of their symptoms. These symptoms include somatization (12 points), obsessive-compulsive behavior (10 points), interpersonal sensitivity (9 points), depression (13 points), anxiety (10 points) hostility (6 points), phobic anxiety (7 points), paranoid ideations (6 points), psychoticism (10 points) and another factor—major depression (7 points). Global severity index is the mean of all 90 items which reflects the overall level of psychological and emotional distress.

In the current study, educated cases and controls completed the SCL-90R questionnaire, themselves under observation of unbiased previously-educated interviewers in a calm environment at time of referral to the Clinic. For those uneducated persons, SCL-90R questionnaire was asked and completed by same interviewers under the same condition. Interviewers were blind to the state of affliction of cases and controls. Eighty-seven patients with Behçet's disease were interviewed. However, there were 23 indeterminate results or missing responses, so 64 controls were questioned.

Statistical analyses

SPSS, version 13 (SPSS Inc, Chicago, Illinois) was used for all statistical analyses. Scores of each symptom in SCL-90R and global severity index were compared between case and control groups and also between categorized subgroup of patients. To compare inter-group means, Levene's test for equality of variances and Student's *t*-test were performed. A $P < 0.05$ was considered statistically significant.

Results

Patients included 40 women and 24 men. The mean \pm SD age of patients was 36.2 \pm 8.9; they

had a mean \pm SD of 8.5 \pm 4.7 years of education. Controls were age-, sex- and education-matched with case group. The mean \pm SD duration of the disease was 9.7 \pm 6.1 for men and 7.3 \pm 6.6 for women.

All patients with Behçet's disease had recurrent oral ulcers. Arthralgia (77%), genital ulcers (56%), skin lesions (59%), ocular manifestations (44%), positive pathergy test (33%) and vascular involvement (10%) were other major findings. Pulmonary, cardiac, gastrointestinal and neurological complications were seen in <5% of patients.

Sixty-three percent of patients were receiving corticosteroids at the time of interview. Patients who received immunosuppressive drugs (e.g., cyclophosphamide, azathioprin, methotrexate) were <10%. None of the patients had any significant comorbid diseases.

Patients with Behçet's disease had significantly higher global severity index than the comparison group (table 1). Moreover, patients with Behçet's disease had significantly higher scores in hostility, anxiety and somatization.

Table 1: Mean \pm SD SCL-90R scores in patients with Behçet's disease and healthy comparison group.

SCL-90R SCALES	Patients (N=64)	Comparison Group (N=65)	P value
Somatization	17.2 \pm 10.9	10.6 \pm 9.6	<0.01
Obsessive compulsive	11.3 \pm 8.3	9.9 \pm 7.3	0.31
Interpersonal sensitivity	9.8 \pm 7.3	8.3 \pm 5.8	0.20
Depression	16.0 \pm 11.1	13 \pm 9.6	0.19
Anxiety	11.6 \pm 9.2	8.5 \pm 7.7	0.04
Hostility	5.8 \pm 4.6	4.1 \pm 3.6	0.03
Phobic anxiety	3.9 \pm 4.2	2.7 \pm 3.1	0.08
Paranoid ideations	7.9 \pm 4.9	7.3 \pm 4.8	0.41
Psychoticism	8.4 \pm 6.9	6.6 \pm 6.5	0.13
Additional(major depression)	8.3 \pm 4.6	6.8 \pm 4.4	0.64
Global severity index	1.10 \pm 6.2	0.86 \pm 5.4	0.04

In those aged <30 years, there was no significant differences in SCL-90R scales between cases and controls; comparing patients and controls older than 30, there was significant differences in anxiety ($P=0.031$) and somatization ($P=0.001$). Anxiety scores of patients and controls older than 30 were 12.3 \pm 9.8 and 8.5 \pm 7.7, respectively. Somatization scores of patients and controls older than 30 were 18.1 \pm 11.6 and 11.0 \pm 9.9, respectively.

Men with Behçet's disease had significantly higher scores in phobic anxiety ($P=0.011$), hostility ($P=0.03$) and somatization ($P=0.010$) than male controls; on the other hand, female patients had only significant difference in somatization scale with female controls (P value=0.011).

SCL-90R scores did not correlate with use of corticosteroids.

Coming to different manifestations of Behçet's disease, those with arthralgia had significant ($P<0.01$) higher scores in somatization than patients without arthralgia. Patients with skin involvement had a significantly ($P=0.029$) higher psychoticism scales than those without the symptoms. Otherwise, there was no significant association between different presentations of the disease and SCL-90R scores, nor between duration of the disease and the score.

Discussion

We found that patients with Behçet's disease had a higher psychological distress as measured by global severity index reported from SCL-90R. The patients had particularly higher scores for aggression, anxiety and somatization which were more pronounced in older patients. Male and female patients acted similarly for somatization. However, phobic fears and hostility scales were only higher than controls in male patients. Since SCL-90R scores were not significantly different between those who were on steroid and those who did not use it, difference in psychological distress could not be attributed to adverse effects of corticosteroids. Joint and skin manifestations were the only major complications affecting psychological distress in some ways mentioned above. Ocular involvement is one of the most crippling complications of Behçet's disease. Lack of significant association of psychological distress and ocular involvement is somehow unexpected. This observation may be in part due to small sample size of patients studied.

SCL-90R was a valid and reliable test for detection of psychological distress in our study sample. Content validity of SCL-90R has been previously confirmed in several studies.^{3,4,5,6} The questionnaire was tested on 25 patients with Behçet's disease who selected at random and yielded a reliability coefficient (α) of 0.97 (Cronbach test).

Although, to the best of our knowledge, this is the first study conducted for evaluation of patients with Behçet's disease by SCL90-R, our results were consistent with previous reports which used other psychometric batteries. Koptage-Ilal, et al (1983) using a psycho-analytically-oriented interview and Rorschach test, reported some psychological disorders including higher frequencies of anxiety in patients with Behçet's disease.⁷

Oktem-Tanor, et al (1999) found clinical impression of personality changes in 75% of patients with Behçet's disease. These patients showed disinhibition and apathy.⁸

Calikoglu, et al (2001) studied 23 patients with Behçet's disease and found significant higher scores in Beck depression, Beck anxiety and brief symptom inventories as compared to patients with chronic psoriasis.⁹

In our previous study, 25% of patients with Behçet's disease had episodic or chronic tension-type headache which can be considered equivalents of depression and anxiety.¹⁰

Karlidag, et al (2005) reported that patients with Behçet's disease had significantly higher scores in Beck anxiety inventory, Hamilton depression rating scale and Toronto Alexithymia scales. In comparison to healthy subjects, 70% of their patients reported a stress factor before the evaluation of Behçet's disease and 79.4% of them believed in an association between occurring a stressful event and relapse of their disease.¹¹

Furthermore, several patients with Behçet's disease and frank psychiatric manifestations were reported earlier.¹²⁻¹⁵

From a neurological point of view, significant higher scores of somatization scale in both men and women are of paramount importance. Frequency of neurologic involvement in Behçet's disease varies between 2.5% and 49%.¹ This difference was not only due to geographic and ethnic factors but also attributed to inclusion of some "soft" symptoms better explained by neurosis in patients who had this chronic and sometimes crippling disease. Our results reconfirmed the importance of psychological evaluation of patients with Behçet's disease to exclude functional sources of patient's complaints.

This study shows the applicability of SCL-90R for evaluation of psychological distress in patients with Behçet's disease. Further psychometric studies of patients with Behçet's disease, especially in different cultures in which different ways of coping with the disease may exist, are suggested. Comparison with disease severity index (e.g, the index that proposed by Bakhta, et al)¹⁶ must also be considered. Lastly, our results emphasized on mandatory collaboration of psychiatrist, neurologist and rheumatologist for the diagnosis and management of neuro-Behçet's disease. Psychological determinants of a chronic disabling illness such as Behçet's disease may interfere with the diagnosis of neurological complications.

Acknowledgments

We are indebted to Professor Fereydoon Davatchi for his invaluable suggestions and to Dr. Maryam Raiatpisheh for her cooperation. This study was supported by a grant from Shiraz University of Medical Sciences.

References

- 1 Borhani Haghighi A, Pourmand R, Nikseresht AR. Neuro-Behçet's disease. A review. *Neurologist* 2005; 11: 80-9.
- 2 Rief W, Fichter M. The Symptom Check List SCL-90-R and its ability to discriminate between dysthymia, anxiety disorders, and anorexia nervosa. *Psychopathology* 1992; 25: 128-38.
- 3 Olsen LR, Mortensen EL, Bech P. The SCL-90 and SCL-90R versions validated by item response models in a Danish community sample. *Acta Psychiatr Scand* 2004; 110: 225-9.
- 4 Cuhadaroglu F, Yazici KM. Psychiatric symptoms among Turkish adolescents. *Turk J Pediatr* 1999; 41: 307-13.
- 5 Wiggins S, Whyte P, Huggins M, et al. The psychological consequences of predictive testing for Huntington's disease. Canadian Collaborative Study of Predictive Testing. *N Engl J Med* 1992; 327: 1401-5.
- 6 Bujak DI, Weinstein A, Dornbush RL. Clinical and neurocognitive features of the post Lyme syndrome. *J Rheumatol* 1996; 23: 1392-7.
- 7 Koptagel-Ilal G, Tunçer O, Enbiyaoğlu G, Bayramoğlu Z. A psychosomatic investigation of Behçet's disease. *Psychother psychosom* 1983; 40: 263-71.
- 8 Oktem-Tanör O, Baykan-Kurt B, Gürvit IH, et al. Neuropsychological follow-up of 12 patients with neuro-Behçet disease. *J Neurol* 1999; 246: 113-9.
- 9 Calikoglu E, Onder M, Cosar B, Candansayar S. Depression, anxiety levels and general psychological profile in Behçet's disease. *Dermatology* 2001; 203: 238-40.
- 10 Ashjazadeh N, Borhani Haghighi A, Samangoie Sh, Moosavi H. Neuro-Behçet's disease: a masquerader of multiple sclerosis. A prospective study of neurologic manifestations of Behçet's disease in 96 Iranian patients. *Exp Mol Pathol* 2003; 74: 17-22.
- 11 Karlıdag R, Unal S, Evereklioglu C, et al. Stressful life events, anxiety, depression and coping mechanisms in patients with Behçet's disease. *J Eur Acad Dermatol Venereol* 2003; 17: 670-5.
- 12 Sim M. Behçet's syndrome as a psychiatric disorder. *Am J psychiatry* 1983; 140: 816.
- 13 Tanaka H, Takeshita T, Nagayama M. A case of Behçet's syndrome with severe mental disorders. *Clin Neurol* 1964; 4: 425-30.
- 14 Borson S. Behçet's disease as psychiatric disorder: a case report. *Am J Psychiatry* 1982; 139: 1348-9.
- 15 Yamamori C, Ishino H, Inagaki T, et al. Neuro-Behçet's disease with demyelination and gliosis of the frontal white matter. *Clin Neuropathol* 1994; 13: 208-15.
- 16 Bhakta BB, Brennan P, James TE, et al. Behçet's disease: evaluation of a new instrument to measure clinical activity. *Rheumatology* 1999; 38: 728-33.