Comparison of Patients' Psychological Status between Controlled Seizures and Uncontrolled Seizures by Symptom Checklist 90

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Abstract: Purpose. Psychological treatment is one of the most important treatment options available to patients with epilepsy. It is vital to determine whether long-term psychological treatment is necessary. The purpose of this study is to compare the psychological status of patients' in which seizures are controlled with that of patients who experience uncontrolled seizures by Symptom Checklist 90 (SCL 90). **Method.** Patients with epilepsy were divided into two groups: Controlled seizure group ($n=64$, seizure free 1－5 years), and uncontrolled seizure group ($n=61$). The two groups were matched in gender, age, duration of disorder, education and personality (Eysenck personality questionnaire, EPQ). SCL 90 was used to test psychological status and a social support questionnaire used to assess social support status. **Result.** Compared with the average in the Chinese population, the factor scores of somatization (mean 1.65±0.57 SD), obsessive-compulsive (mean 2.08±0.79 SD), depression (mean 1.90±0.85 SD), anxiety (mean 1.80±0.74 SD), hostility (mean 1.84±0.97 SD), photic anxiety (mean 1.58±0.59 SD), and psychotic tendencies (mean 1.60±0.59 SD), were significantly higher in the uncontrolled seizures group ($P<0.05$); the factor scores of obsessive-compulsive (mean 2.01±0.65 SD), hostility (mean 1.68±0.61SD), photic anxiety (mean 1.41±0.42 SD), and psychotic tendencies (mean 1.53±0.55SD) were significantly higher in the controlled seizure group ($P<0.05$). However, only the factor score of somatization was significantly higher in the uncontrolled seizure group than that of the controlled seizures group (mean 1.33±0.25 SD, $P<0.05$). At the same time, there was no significant difference in social support between the two groups ($P>0.05$). The score of each group was below 35 (mean 25.67±4.97 SD for controlled seizures and mean 24.38±4.53 SD for uncontrolled seizures). This result indicates that both groups were short of good social support. **Conclusion.** Patients with epilepsy need long-term psychological treatment and good social support. [Life Science Journal. 2005;2(1):46－48] (ISSN: 1097－8135).

Keywords: epilepsy; seizure; psychology; Symptom Checklist 90; social support

1 Introduction

Epilepsy is a chronic neurological disease. As in other chronic conditions, more attention should be paid to the quality of life (QOL) of patients with epilepsy. Psychological functioning is one of the most important factors in the health-related quality of life model[1]. Lots of studies show that there are psychological disorders in the patients with epilepsy. But there are few articles on the study of the psychology of patients with controlled epilepsy. Symptom Checklist 90 (SCL 90) is a major measure of mental health symptoms[2].

The present study was designed to compare the psychological status of patients' in which seizures were controlled with that of patients who experienced uncontrolled seizures by the Symptom Checklist 90 (SCL 90) and social support questionnaire.

2 Patients and Methods

2.1 The criteria of patients and groups

Patients were considered suitable for the study if they met the following criteria: Age >12 years, education >6 years, and had a normal intelligence level. If patients had history of psychiatric illness or were on psychiatric medication, they would be excluded.

Patients with epilepsy were chosen in two groups. Group one (controlled seizure group) consisted of 64 patients known to be seizure free for 1 – 5 years. Group two comprised 61 subjects who continued to experience seizures. The two groups were matched in gender, age, duration of disorder, education and personality.

2.2 The explanation of questionnaire

Eysenck personality questionnaire (EPQ) (Table 1): SCL 90 was used to test psychological status and social support status was assessed with a social support questionnaire. The patients recruited from community. The SCL 90 and EPQ are translated versions. They are validated and self-report inventory.

Table 1. The conditions matched in two groups

	Controlled seizure group	Uncontrolled seizure group
Gender	Female: $n=24$; male: $n=40$	Female: $n=24$; male: $n=37$
Age	Mean: 24.6 years	Mean: 25.8 years
Duration of disorder	Mean: 6.4 years	Mean: 10.1 years
Education	>6 years: $n=64$	>6 years: $n=61$
Personality (mean ± SD)	P: 5.44 ± 3.08	P: 6.39 ± 3.91
	E: 10.65 ± 4.48	E: 11.25 ± 5.31
	N: 10.06 ± 4.93	N: 11.23 ± 5.61
	L: 13.12 ± 3.62	L: 12.65 ± 4.31

$P>0.05$: Personality (P, E, N, L) of two groups compared with each other. P is the abbreviation of psychoticism; E is the abbreviation of Extroversion; N is the abbreviation of neuroticism; L is the abbreviation of lie.

2.3 Statistical methods

The factor scores of EPQ and SCL 90 in two groups compared with the averages within the Chinese population respectively, and compared each other used paired t-test.

3 Results

Compared with the averages within the Chinese population[2], the factor scores of somatization, obsessive-compulsive, depression, anxiety, hostility, photic anxiety, and psychoticism were significantly higher in the uncontrolled seizure group ($P<0.05$); the factor scores of obsessive-compulsive, hostility, photic anxiety, and psychoticism were significantly higher in the controlled seizure group ($P<0.05$). However, only the factor score of somatization was significantly higher in the uncontrolled seizure group than that of the controlled seizure group (Table 2). At the same time, there was no significant difference in social support between two groups ($P>0.05$). The scores from both groups were below 35 (Table 3). This suggests that both groups were short of good social support.

Table 2. Factor scores of the SCL 90 in the two groups

Factor	Uncontrolled seizures group		Controlled seizures group	
	Mean ± SD	P	Mean ± SD	P
Somatization	1.65 ± 0.57	<0.05	1.33 ± 0.25	*P<0.05
Obsessive-compulsive	2.08 ± 0.79	<0.05	2.01 ± 0.65	<0.05
Depression	1.90 ± 0.85	<0.05		
Anxiety	1.80 ± 0.74	<0.05		
Hostility	1.84 ± 0.97	<0.05	1.68 ± 0.61	<0.05
Photic anxiety	1.58 ± 0.59	<0.05	1.41 ± 0.42	<0.05
Psychoticism	1.60 ± 0.59	<0.05	1.53 ± 0.55	<0.05

$P<0.05$: Compared with norm of Chinese; * $P<0.05$: somatization in uncontrolled seizure group compared with that in controlled seizure group.

Table 3. Social support scores of the two groups

	Uncontrolled seizures group (mean ± SD)	Controlled seizure group (mean ± SD)	P
Social support	25.67 ± 4.97	24.38 ± 4.53	>0.05

$P>0.05$: Social support scores of two groups compared each other.

4 Discussion

There are specific measurement parameters for the efficacy of treatment of epilepsy. Current seizure frequency is one of the most important predictors. Psychological factors, as well as the Quality-of-life (QOL) of the patient, are also important to achieve an accurate prognosis[3]. Research has confirmed that patients with epilepsy inevitably have psychological disorders such as depression and anxiety, as such symptoms accompany the diagnosis of epilepsy. It is important to understand the relationship between the frequency of epilepsy and the psychological symptoms presented. For example, in cases where seizures are controlled, do psychological symptoms disappear or decrease drastically? It is necessary to determine whether a long-term psychological treatment is required? We compared the psychology status of patients in whom seizures were uncontrolled with that of patients in whom seizures were controlled (seizure-free 1 – 5 years), by Symptom Checklist 90 (SCL 90). We found the factor score of somatization to be significantly higher in the uncontrolled seizure group than that of controlled seizure group. It is suggested that the patients still present many psychological symptoms in the controlled seizure group and need long-term psychological treatment. Somatization may be the factor that can easily change in patients with 1 – 5 seizure-free years.

Psychological status is related to the frequency of epilepsy in patients. The more frequently that seizures occur, the poorer the psychological status of epileptic patients is expected to be[4,5]. However, the patient's perception of seizure severity has a stronger relation to psychosocial adjustment than actual seizure frequency[6-11]. Our results indicate that epileptic patients continue to present psychological symptoms even though their epilepsy has been seizure-free for 1 – 5 years. There are some reasons for these results: fear of repeat seizures; lack of confidence in the future; lack of social support; and additional factors.

Depression and anxiety are the major factors causing psychological distress in epilepsy[12-14]. These factors were shown to be significantly higher in the cohort that experienced uncontrolled seizures compared with the average in the Chinese population. However, the scores for the group in whom seizures are controlled were not significantly different from the population average. This indicates that depression and anxiety are to some extent related to the frequency of epilepsy. Gramer has studied the influence of depression on seizure severity[15]. He found that patients with depression reported higher levels of perceived severity and distress from seizures than those patients without depression experiencing similar types of seizures.

However, Attarian, studying the relationship between depression and intractability of seizures, found that patients with epilepsy have a higher prevalence of depression than the general population, the intractability of the seizure disorder does not seem to be an independent risk factor for the occurrence of depression[16]. There is no relationship perceived between the severity of depression and monthly seizure rate. Therefore attention should be paid to both seizure severity and depression.

Social support plays an important role in health and good mood[17,18]. Hence we investigated the level of social support experienced by the two groups. We found that in both the uncontrolled seizure group and the controlled seizure group the level of social support was low. Thus it is suggested that patients with epilepsy need long-term psychological treatment and good social support.

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