

Evaluation of Life Quality in Epilepsy Patients and Review of Psychiatric Diagnosis

Epilepsi Hastalarında Yaşam Kalitesinin Değerlendirilmesi ve Psikiyatrik Tanılarının Gözden Geçirilmesi



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Summary

Objectives: In patients with epilepsy, the level of harmony and balance between life expectancy and physical, psychological, and social limitations determines the level of quality of life. Our aim in this study was to determine the quality of life and psychiatric diagnoses in patients with epilepsy and to investigate the effects they have on anxiety and depression.

Methods: This study comprised 161 patients with epilepsy, whose anamnesis, neuroimaging, electroencephalography (EEG), neuropsychometric tests and psychiatric consultations took place at the epilepsy clinic. A 36-Item Short Form Survey (SF-36) life scale, Hamilton Anxiety Rating Scale (HAM-A) and Hamilton Depression Rating Scale (HDRS) were applied to the patients.

Results: Of the seizures, 30% (49/161) were found to be generalized onset tonic-clonic-myoelonic seizures, 29% (48/161) were focal onset motor seizures, 23% (35/161) were focal onset bilateral tonic-clonic seizures, and 18% (29/161) were focal onset non-motor seizures. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), 41 patients had depressive adjustment disorder, 38 patients had major depressive disorder, 12 patients had conversive disorder, 12 patients had dysthymic disorders, five patients had mild mental retardation, four patients had psychological mental disorders, which could not be otherwise specified, and three patients had obsessive-compulsive disorder.

Conclusion: The most common psychiatric disorders in epilepsy are known to be affective diseases, particularly depression (9–22%). In our study, depression was the most common comorbid condition in patients, and it was noteworthy that a significant loss was apparent regarding the patients' quality of life as results of the quality of life scale showed. To identify the accompanying social and psychiatric disorders of patients and to consult with psychiatry when necessary during follow-up are as important as seizure control for increasing the quality of life of patients.

Keywords: Anxiety; depression; epilepsy; quality of life.

Özet

Amaç: Epilepsili hastalarda, yaşamdan beklentilerle fiziksel, psikolojik ve sosyal kısıtlılık durumları arasındaki uyum ve dengenin derecesi yaşam kalitesinin düzeyini de belirlemektedir. Bu çalışmada, epilepsili hastalarda yaşam kalitesi, psikiyatrik tanıları ile anksiyete ve depresyon üzerine etkisini araştırmayı hedefledik.

Gereç ve Yöntem: Epilepsi polikliniğinde anamnezleri, nörogörüntülemeleri, EEG'leri ve nöropsikometrik testleri ve psikiyatri konsültasyonları yapılan toplam 161 epilepsi hastası çalışmaya alındı. Hastalara SF-36 yaşam ölçeği, HAS ve HDS uygulandı.

Bulgular: Nöbetlerin %30'u (49/161) jeneralize başlangıçlı tonik-klonik-miyoklonik nöbet, %29'u (48/161) fokal başlangıçlı motor nöbet, %23'ü (35/161) fokal başlangıçlı iki taraflı tonik-klonik nöbet, %18'i (29/161) fokal başlangıçlı non-motor nöbet olarak belirlenmiştir. DSM-IV'e göre psikiyatri tanıları sırasıyla 41'inde depresif mizaçlı uyum bozukluğu, 38'inde majör depresif bozukluk, 12'sinde konversif bozukluk, 12 distimik bozukluk, beş hafif düzey mental retardasyon, dört hastada başka türlü adlandırılmayan psikolojik bozukluk, üç obsesif kompulsif bozukluk şeklindeydi.

Sonuç: Epilepsi de en sık gözlenen psikiyatrik bozukluğun da özellikle depresyon (%9–22) başta olmak üzere afektif hastalıklar olduğu bilinmektedir. Bizim çalışmamızda da hastalarda depresyon en sıklıkla rastlanan ko-morbid durum olup yaşam kalitesi ölçeğinde hastaların belirgin kayıp olduğu dikkati çekmiştir. Yapılan kontrollerde hastaların eşlik eden sosyal ve psikiyatrik sorunlarına saptamak gerekli durumlarda psikiyatri konsültasyonu istemek, hastaların yaşam kalitesini arttırmada nöbet kontrolü kadar önemlidir.

Anahtar sözcükler: Anksiyete; depresyon; epilepsi; yaşam kalitesi.

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Introduction

Epileptic seizures occur as a result of abnormal and dense discharges of neurons in the brain, with or without changes in consciousness, and are characterized by motor, sensory, autonomic, or psychic symptoms. Epilepsy is one of most common neurological disorders with an average lifetime prevalence of 4–10/1000.^[1,2] Epilepsy is a chronic disease, and the primary objective is to control seizures. However, another major problem for these patients is the presence of accompanying psychiatric disorders. The most common psychosocial problems have been determined as depression, anxiety, and low self-esteem.^[3,4] These problems affect the quality of life of the patients. According to the definition outlined by the World Health Organization (WHO), quality of life is a state of complete physical, mental, and social well-being, not merely the absence of disease or disability.^[5] Thus, the identification of psychiatric comorbidity and recovery with appropriate treatment methods has become increasingly important for improving the quality of life. Our aim in this study was to determine the quality of life and psychiatric diagnoses in patients with epilepsy and to investigate their impact on anxiety and depression.

Materials and Methods

In this study, a retrospective evaluation was made of 161 epileptic patients, who were admitted to Uludağ University Neurology Department, Epilepsy Polyclinic in 2013-2016 and for whom psychiatric consultation was requested based on their histories and psychiatric symptoms. The Hamilton Anxiety Rating Scale (HAM-A), Hamilton Depression Rating Scale (HDRS), and 36-Item Short Form Survey (SF-36) life scale results of the screened patients were evaluated. The seizure types of the patients, who were followed at the epilepsy outpatient, were determined according to the 2017 ILAE classification.^[6] The psychiatric comorbidities of patients whose seizure types had been classified were identified, and a psychiatrist evaluated their association with each other.

Scales:

Hamilton Depression and Anxiety Scale

The Hamilton Depression Scale (HAM-D) measures a patient's level and severity of depression. Applied by the interviewer, it consists of 17 items. Developed by Hamilton in 1960, Akdemir et al.^[7] conducted the Turkish validity and reliability study in 1996. Hamilton Anxiety Scale (HAM-A): HAM-A is a 14-item scale applied by the clinical observer,

which determines the anxiety level and symptom distribution, measures the change in severity and provides a five-point Likert type measurement. Yazıcı et al. conducted the validity and reliability study of the Turkish form of the scale.^[8]

Quality of Life Scale (SF-36)

The quality of life scale (SF-36) is a well-known and commonly used scale that can assess a person's health status. The scale consists of 36 items and provides measurements in eight dimensions. These are physical function (10 items), role restriction due to physical problems (4 items), pain (2 items), social function (2 items), mental health (5 items), role restriction due to emotional state (3 items), energy (4 items), and general health understanding (5 items). The Turkish validity and reliability study was conducted for this scale. A Likert-type evaluation is performed except for some items and the previous four weeks are considered. Sub-scales evaluate the patient by using scores between 0 and 100; 0 indicating poor health, while 100 indicates good health. There are reports that suggest that it can be used to evaluate the quality of life of individuals with physical disorders.^[9-11]

Statistical analysis

Data analyses were conducted using the SPSS for Windows 13.0 package program. Data were expressed as numbers, percent, and mean \pm standard deviation. The Mann-Whitney U test was used for the intergroup comparison, whereas the Pearson correlation test was used to evaluate the relationship between the variables. A p-value of <0.05 was considered statistically significant.

Results

The demographic characteristics of the patients are shown in Table 1. Of the patients included in this study, 53% were females. The mean age of the patients was 47 years. With regard to the seizures, 30% (49/161) were generalized onset tonic-clonic-myoclonic seizure, 29% (48/161) were focal onset motor seizures, 23% (35/161) were focal onset bilateral tonic-clonic seizures and 18% (29/161) were focal onset non-motor seizures. With reference to the patients, 98 were receiving combined antiepileptic treatment, whereas 63 were receiving monotherapy. The psychiatric consultations and evaluations determined that the most common psychiatric disorder was depressive adjustment disorder, which was seen in 25% (41) of the patients in the study group, according to DSM-5 criteria.

Table 1. Demographic characteristics of the patients, types of seizures and psychiatric comorbidities

	n	%
Female	85	53
Male	76	47
Mean age	47	
Seizure types		
Generalized onset tonic-clonic-myoclonic seizure	49	30
Focal onset motor seizure	48	29
Focal onset bilateral tonic-clonic seizure	35	23
Focal onset non-motor seizure	29	18
Psychiatric diagnoses according to DSM-IV		
Normal	46	30
Depressive adjustment disorder	41	25
Major depressive disorder	38	24
Conversion	12	7
Dysthymia	12	7
Mild mental retardation	5	3
Psychotic disorder not classified at somewhere else	4	2.1
Obsessive-compulsive disorder	3	1.9

In the evaluation using the SF-36 quality of life scale, there were no significant results in the female patients in terms of physical function, role limitation due to physical problems, pain, social functioning, and mental health parameters (Table 2). However, the general health status of the female patients with simple and complex partial and secondary generalized seizures was found to be significantly

low ($p < 0.001$). In the female patients included in each of the different epilepsy groups, there were significant results regarding role restriction due to energy and emotional state ($p < 0.001$). HAM-D and HAM-A results (Table 3) revealed that the patients with primary generalized seizures had depression, whereas the patients with complex partial and secondary generalized seizures had both depression and anxiety ($p < 0.001$).

In the evaluation using the SF-36 quality of life scale, no significant results were observed in physical condition and function, pain and mental health parameters in males (Table 4). However, role restriction due to physical problems and low social functioning were found to be significant in the patients with secondarily generalized seizures ($p < 0.001$). In the male patients included in each of the different epilepsy groups, there were significant results regarding general health-related items and role restriction due to energy and emotional state ($p < 0.001$).

Considering the Hamilton Anxiety and Depression Scale applied to the patients with epilepsy, the results of the male patients with generalized onset tonic-clonic-myoclonic seizure, focal onset motor seizure, and focal onset bilateral tonic-clonic seizure (Table 5) were found to be significant regarding depression ($p < 0.001$). The results of the patients with focal onset non-motor seizures were not significant in terms of anxiety and depression ($p > 0.05$). In addition, the presence of anxiety in male patients was determined to be not significant in any epilepsy group ($p > 0.05$).

Table 2. Evaluation of SF-36 subscales for females

SF-36 criteria for females	Generalized onset tonic-clonic-myoclonic seizure	Focal onset motor seizure	Focal onset bilateral tonic-clonic seizure	Focal onset non-motor seizure	p
	Mean±SD	Mean±SD	Mean±SD	Mean±SD	
Physical function	53.8±16.54	52.43±17.01	55.0±18.83	60.0±27.76	0.802
Restriction of role due to physical problems	51.4±12.34	50.8±10.05	53.21±11.12	52.10±18.6	0.676
Pain	56.44±21.1	55.11±19.95	53.19±18.65	59.11±11.25	0.734
General health	54.46±20.05	36.38±18.75	45+65±19.67	39.12±09	0.001
Energy	24.32±11.54	24.84±10.23	22.09±12.23	19.12±09	0.001
Social function	42.3±11.01	49.4±15.50	51.4±32	50.02±0.9	0.961
Restriction of role due to emotional status	21.4±12.34	16.4±12.34	31.4±12.34	11.4±12.34	0.001
Mental health	41.4±10.23	43.4±11.0	44.12±10.87	46.4±19.43	0.934

SF-36: The Quality of Life Scale; SD: Standard deviation.

Table 3. Anxiety and depression rates in females

Female patients	Hamilton Anxiety Scale	Hamilton Depression Scale
Generalized onset tonic-clonic-myoclonic seizure (n=41)	8.70±3.13 p>0.05	11.34±3.85 p<0.001
Focal onset motor seizures (n=39)	12.85±2.90 p<0.001	10.05±3.40 p<0.001
Focal onset non-motor seizures (n=20)	6.33±2.94 p>0.05	6.19±1.64 p>0.05
Focal onset bilateral tonic-clonic seizure (n=17)	10.52±2.36 p<0.001	9.70±2.18 p<0.001

Table 4. Evaluation of SF-36 subscales for males

SF-36 criteria for males	Generalized onset tonic-clonic onset myoclonic seizure	Focal onset motor seizure	Focal onset non-motor seizure	Focal onset bilateral tonic-clonic seizure	p
	Mean±SD	Mean±SD	Mean±SD	Mean±SD	
Physical function	56.15±21.12	54.30±11.12	51.12±11.12	52.60±12.23	0.655
Restriction of role due to physical problems	61.4±12.34	60.2±21.04	63.21±09.98	42.10±11.19	0.001
Pain	56.60±11.1	52.99±16.65	53.19±12.45	53.19±11.01	0.679
General health	44.41±10.10	34.58±21.39	46+01±20.01	29.19±11	0.001
Energy	21.16±16.55	22.43±11.45	21.07±10.53	16.19±39	0.001
Social function	42.3±11.01	49.4±15.50	51.4±32	30.02±0.9	0.001
Restriction of role due to emotional status	21.4±12.34	16.4±12.34	31.4±12.34	11.4±12.34	0.001
Mental health	52.45±11.86	54.23±10.05	53.6±14.9	54.24±16.65	0.661

SF-36: The Quality of Life Scale; SD: Standard deviation.

Table 5. Anxiety and depression rates in males

Male patients	Hamilton Anxiety Scale	Hamilton Depression Scale
Generalized onset tonic-clonic-myoclonic seizure (n=41)	8.70±3.13 p>0.05	11.34±3.85 p<0.001
Focal onset motor seizure (n=39)	12.85±2.90 p<0.001	10.05±3.40 p<0.001
Focal onset non-motor seizure (n=20)	6.33±2.94 p>0.05	6.19±1.64 p>0.05
Focal onset bilateral tonic-clonic seizure (n=17)	10.52±2.36 p<0.001	9.70±2.18 p<0.001

Discussion

Epilepsy patients are at a higher risk of psychopathology when compared with the normal population. In our study, 70% of patients with epilepsy were found to have psychiatric comorbidity. In a study including adults patients with epilepsy who were referred to primary health care services,

the rates of psychiatric disorder were examined through the Clinical Interview Schedule (CIS) and psychiatric disorders were determined in 37 of 82 patients.^[12] In a study by Manchanda et al.^[13] evaluating 71 refractory epilepsy patients using the General Health Questionnaire, psychiatric disorders were observed at a rate of 45%. Currie et al.^[14] reported that of the 666 epilepsy patients, 375 (56%) were normal,

127 (19%) were anxious, 71 (11%) were depressed, 47 (7%) were aggressive, 41 (6%) were obsessive and 38 (6%) had severe affective disorder.

Our study included patients for whom psychiatric consultations were requested with the suspicion of psychiatric symptoms. This may explain the high rate of psychiatric comorbidity in epilepsy patients in our study. Factors that could explain the increased risk of psychopathology in epilepsy can be divided into three groups; namely, neurobiological factors, psychosocial factors, and drug-related factors.^[15] Neurobiological factors are epilepsy-causing pathologies, type and number of seizure, duration of disease, the age of onset, and whether the seizure is under control. Psychosocial factors can be listed as follows: having a chronic disease, low socioeconomic level, low educational level, discrimination by society due to the disease, and fear of seizure. Drug-related factors are the mechanism of the antiepileptic drug used, the number of drugs, duration, and drug interaction.

In several studies, findings showed that epilepsy affects the individuals' quality of life.^[16,17] The data of a Turkish study, determined that seizure frequency, the presence of depression and the fatigue were the most important factors that affect the quality of life of patients with epilepsy.^[18] Patients with focal to bilateral tonic-clonic seizure have been observed to be in poor condition regarding quality of life, depression, anxiety, and family support when compared with another type of seizures. Likewise, in our study, general health problems, energy loss, and role restrictions due to the emotional state were observed in the quality of life of the epilepsy patients evaluated using SF-36.

Psychiatric disorders accompanying epilepsy are known to have negative effects on the quality of life.^[19,20] Therefore, patients with epilepsy should be evaluated regarding psychiatric disorders. In a study by Swinkels et al.,^[21] the annual prevalence of anxiety disorders in epilepsy cases was found to be 25%, and the annual prevalence of mood disorders was found to be 19%. In a community-based study by Tellez-Zenteno et al.,^[22] the prevalence of lifelong mood disorders and anxiety disorders were found to be similar to those in epilepsy cases (24.4%, 22.8%). In our study, while mood disorder rates in all patients with epilepsy were similar to those of community studies, the anxiety rate was found to be high in the female patients with complex partial and secondary

generalized seizures. However, this rate was found not to be significant in the group of male patients with epilepsy, which suggests that in future studies, male and female patients should be evaluated separately regarding anxiety.

Data obtained from community-based studies have reported that the prevalence rates of depressive disorders in epilepsy are between 20–22%. However, in selected populations, such as tertiary treatment centers or surgery programs, the prevalence rate is even higher and between 30–50%. Our study was found to correlate with these high prevalence results, and this difference is thought to be related to severity of the epilepsy.^[23]

Conclusion

Seizure control is the primary objective in patients with epilepsy. However, the identification and treatment of psychiatric comorbidities in epilepsy patients provide physical well-being, as well as mental and social well-being. Thus, the identification of accompanying social and psychiatric problems during the patient follow-up and a psychiatric consultation when necessary, is as important as providing seizure control, in improving a patient's quality of life.

Peer-review

Externally peer-reviewed.

Conflict of interest

The authors declare that they have no conflict of interest.

Authorship Contributions

Concept: A.B.D., İ.B., C.A.; Design: A.B.D., İ.B., C.A.; Data collection &/or processing: A.B.D., P.U.U.; Analysis and/or interpretation: A.B.D., İ.B., C.A.; Literature search: A.B.D., P.U.U., G.A.; Writing: A.B.D., P.U.U., G.A.

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