

SUICIDE ATTEMPTS IN HOSPITAL-TREATED EPILEPSY PATIENTS

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SUMMARY – Persons suffering from epilepsy are in the group of patients at an increased suicide risk. The basis of every suicidal behavior, including patients suffering from epilepsy, is depression, and to explore the causes of suicidal behavior in epileptics it is necessary to find the causes responsible for the development of depression. Depression is caused by numerous factors divided into psychosocial factors, factors of the illness, and antiepileptic medication factors. The aim of the study was to identify the causes of suicidal behavior in epileptics treated in our hospital. The study included patients suffering from epilepsy treated at our Department from January 1 to December 31, 2009. Based on medical history, patients having attempted suicide were allocated to the experimental group and those without a history of suicidal attempt in the control group. Characteristics of the groups in relation to age and sex were defined first, followed by defining variables used in both groups, i.e. psychosocial factors (marital status, employment status, family environment, psychiatric comorbidity) and disease factors (etiology, type of seizures, duration of the disease, attitude towards treatment, attitude towards illness). Statistical significance was recorded in two psychosocial variables, i.e. family environment, which was significantly better in control group, and psychiatric comorbidity, which was more frequently present in patients having attempted suicide. Study results showed even 14.6% of epilepsy patients to have attempted suicide. Poor family atmosphere and psychiatric comorbidity had a significant role in suicidal behavior. In our study, the variables associated with the disease had no effect on suicidal behavior in epilepsy patients.

Key words: Epilepsy; Suicide attempt; Factors of illness; Family environment; Comorbidity

Introduction

Suicide is most commonly defined as a voluntary and deliberate self-destruction. According to Shneidman, suicide is a conscious, self-destructive act, which ensues from many weaknesses the person has and cannot resolve in another way^{1,2}. Persons suffering from epilepsy are included in the group of patients at an increased suicide risk, which is, according to some statistics, identical to the risk of persons suffering from endogenous depression³, and three times greater than the risk of normal population⁴. According to the literature, suicide is the cause of death in

10% of those suffering from epilepsy⁵ versus 1.4% in normal population⁶. In the background of every suicidal behavior in both healthy persons and those suffering from epilepsy is depression, which is the most common accompanying psychological disorder in the ill persons^{7,8}. In order to understand the causes of suicidal behavior among those suffering from epilepsy, it is essential to analyze the causes of developing depression. Epilepsy is a chronic illness, which stigmatizes, imposes on the ill ones a different life regimen, as well as difficulties in the personal, professional and wide social sphere⁹. Inappropriate attitude of the community towards the patient, poor adjustment to the illness, attitude towards treatment, as well as antiepileptic therapy itself, something that has recently been increasingly reported¹⁰, as well as many other, multifunctional factors, are all causes which lead to the

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development of depression and an increased suicide risk among the ill ones. Although sharp distinction is not possible, the predictors of depression can be classified as the factors closely connected with the disease, then predominantly psychosocial factors¹¹ and factors of medication¹².

Patients and Methods

This retrospective study included all epileptic patients (N=16) hospitalized at Department of Clinical Psychophysiology, Vrapče Psychiatric Hospital, during the period from January 1 to December 31, 2009. Based on their medical histories, six patients with suicidal attempt in their history were allocated to the experimental group (group E). There were five men and one woman, mean age 42.8 years. Ten patients without suicidal attempt in their history were allocated to control group (group C). There were four women and six men, mean age 43.8 years. The following variables were defined: (A) connected to disease

Table 1. Disease duration (years)

E group	9	8	26	37	3	25				
C group	19	48	22	2	53	4	25	12	26	28

(epilepsy): 1) etiology of disease; 2) type of seizures; 3) duration of disease; 4) attitude towards treatment; 5) attitude towards disease; and (B) predominantly psychosocial: 1) marital status; 2) employment status; 3) family environment; 4) psychiatric comorbidity. These variables were applied to both patient groups and differences between the groups were assessed by statistical analysis.

Results

The high risk of suicidal behavior among epileptic patients was proved in this study. As many as 14.6% of patients hospitalized during the year 2009 had a suicide attempt in their past medical histories. In an attempt to discover the cause of increased suicidal behavior in these patients, we compared epileptic patients who had

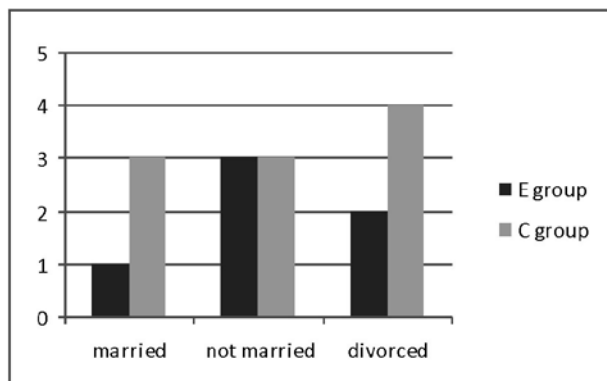


Fig. 1. Marital status.

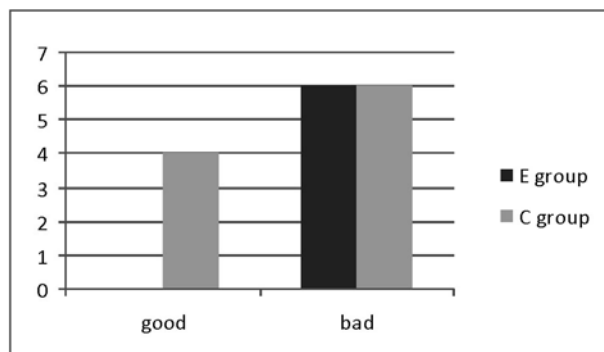


Fig. 3. Family environment.

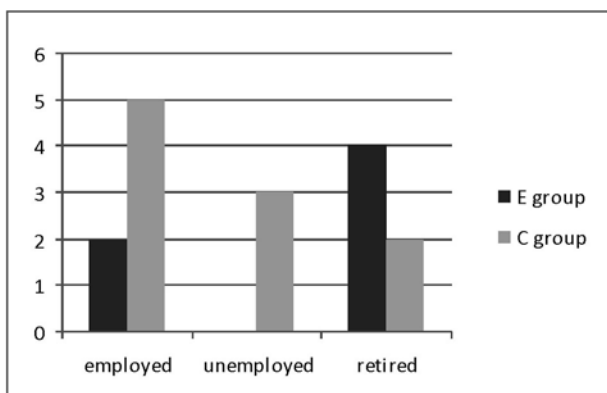


Fig. 2. Employment status.

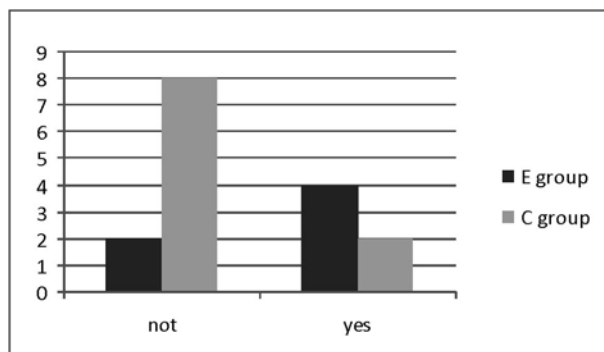


Fig. 4. Psychiatric comorbidity.

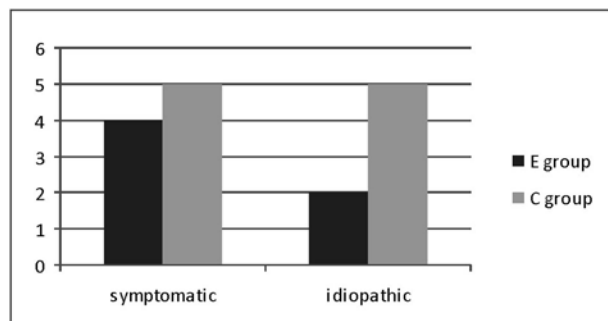


Fig. 5. Etiology of the illness.

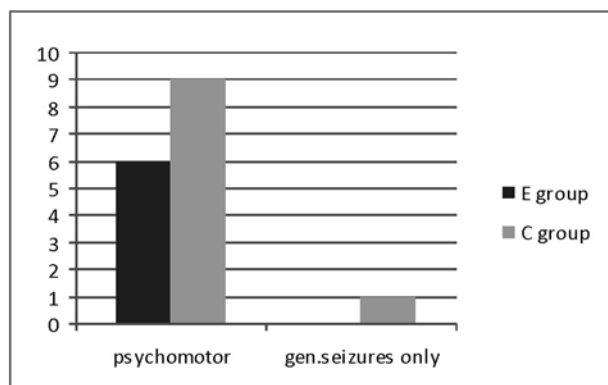


Fig. 6. Seizure type.

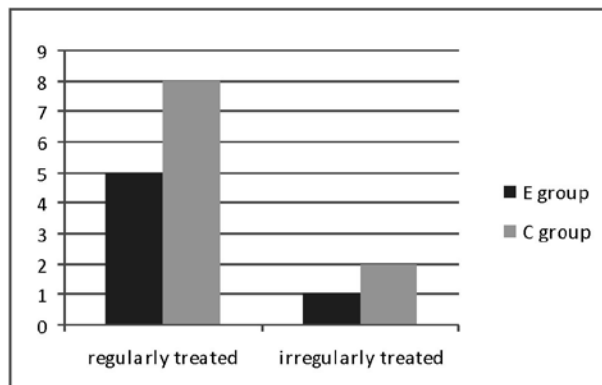


Fig. 7. Attitude towards treatment.

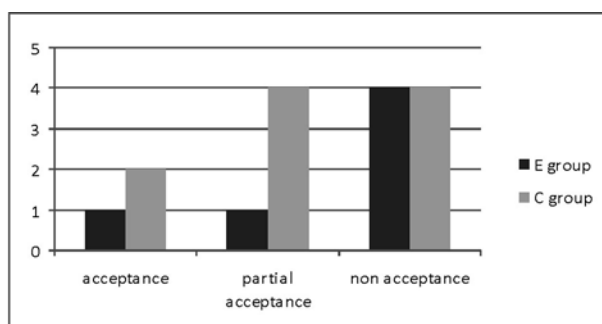


Fig. 8. Attitude towards illness.

attempted suicide (group E) with non-suicidal epileptic patients using a set of psychosocial variables and variables connected with disease in both groups.

The results on psychosocial variables (marital status, employment status, family environment, psychiatric comorbidity) are shown in Figures 1-4.

The results on disease-related variables (etiology of the illness, seizure type, attitude towards illness, attitude towards treatment, disease duration) are shown in Figures 5-8 and Table 1.

Statistical analysis performed by use of χ^2 -test as a standard method of statistical analysis showed none of the study variables to differ statistically significantly between the two patient groups. However, logistic regression analysis yielded statistical significance in two variables, i.e. family environment and psychiatric comorbidity, as shown in Table 2.

Discussion

A high risk of suicidal behavior among persons suffering from epilepsy was also proved in our study:

14.6% of those suffering from epilepsy had attempted suicide. Considering that suicide ensues from depression, looking for the causes of suicidal behavior in epileptic patients, which was also the objective of the study, we defined the variables responsible for the development of depression among patients with epilepsy. Although distinctions between particular variables are not sharp, according to the literature¹¹ we divided them into variables connected with disease and the predominantly psychosocial ones. Both the etiology of epilepsy and the type of seizure are significant in developing depression. It is thus emphasized that psychological changes are more evident in the psychosomatic form of the disease: after trauma, insults¹³ caused by alcohol and the like, as well as in the temporal type^{14,15} as compared with other types of seizures. The duration of disease is an important predictor of the development of depression, and depression more often develops in persons with a long-lasting illness¹⁶. Both the regularity of treatment and the acceptance of illness contribute greatly to the

Table 2. Logistic regression analysis

			Score	df	Significance
Step 0	Variable	Family environment	4.071	1	0.044
		Psychiatric comorbidity	3.484	1	0.062
		Etiology	2.590	2	0.274
		Etiology (1)	2.049	1	0.152
		Etiology (2)	0.423	1	0.515
		Seizure type	0.711	2	0.701
		Seizure type (1)	0.640	1	0.424
		Seizure type (2)	0.027	1	0.869
		Duration of disease	0.596	1	0.440
		Attitude towards treatment	0.027	1	0.869
		Attitude towards disease	0.572	1	0.449
		Marital status	0.356	1	0.551
		Employment	0.423	1	0.515
Overall statistics			15.538	13	0.275

prevention of developing depression^{17,18}. On statistical analysis (logistic regression analysis), we found no statistically significant between-group difference according to disease factors. Although used as predictors in the prevention of depression, employment status and marital status as predominant psychosocial factors were not found to be statistically significant in the present study¹⁹. On the other hand, statistical significance was recorded for psychiatric comorbidity including a possible psychiatric disorder, described as an important factor for development of depression in epileptic patients²⁰. Family environment, under which we presumed developmental conditions and the relation of the community towards those suffering from epilepsy, is a significant predictor in the development and prevention of depression in epilepsy patients and those with suicidal behavior. Persons with epilepsy often grow up in unfavorable family environment, which is different from the one of healthy persons. Over-protective attitude of the family, as one pattern, will result in early frustrations of the ill person,

as well as in increased aggression, which is according to some research, greater than the one of healthy persons. The other pattern, however, non-acceptance, and at the subconscious level 'rejection' of the person with epilepsy, will result in the feeling of inferiority of the ill and poorer presentation of the 'self', i.e. depression. This very variable family environment proved to be statistically significant in our study as well; persons with suicidal attempts had a significantly worse family environment in comparison with control group and together with earlier psychological changes, it has determined the suicidal behavior^{21,22}.

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Sažetak

POKUŠAJ SUICIDA U BOLNIČKI LIJEČENIH BOLESNIKA S EPILEPSIJOM

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Oboljeli od epilepsije ubrajaju se u skupinu s povećanim rizikom samoubojstva. Depresija leži u osnovi svakog suicidalnog ponašanja, pa tako i kod oboljelih od epilepsije, te je u traženju uzroka suicidalnog ponašanja ovih bolesnika nužno iznaći uzroke odgovorne za razvoj depresije. Uzroci depresije oboljelih su mnogobrojni i mogu se podijeliti u pretežito psihosocijalne, čimbenike vezane uz samu bolest i čimbenike medikacije. Cilj istraživanja bio je utvrditi uzroke suicidalnog ponašanja osoba oboljelih od epilepsije liječenih u našoj ustanovi. Ispitivanjem su obuhvaćeni oboljeli od epilepsije liječeni na našem Odjelu od 1. siječnja do 31. prosinca 2009. godine. Uvidom u povijesti bolesti izdvojeni su bolesnici s pokušajem suicida u anamnezi koji su činili ipitivanu skupinu, a bolesnici koji nisu pokušali suicid kontrolnu skupinu. Najprije su opisane značajke skupina u odnosu na dob i spol, a zatim definirane varijable primijenjene na obje skupine: psihosocijalne (bračno stanje, radni status, obiteljsko ozračje, psihičke promjene prije početka bolesti, tj. psihijatrijski komorbiditet) i čimbenici bolesti (etiologija bolesti, vrsta napadaja, trajanje bolesti, odnos prema liječenju, odnos prema bolesti). Rezultati su pokazali statističku značajnost u dvjema psihosocijalnim varijablama: u obiteljskom ozračju koje je bilo značajno bolje u kontrolnoj skupini i u varijabli psihijatrijskog komorbiditeta. Ova varijabla je bila češća u oboljelih od epilepsije koji su pokušali suicid. Ispitivanje je pokazalo da je čak 14,6% oboljelih od epilepsije pokušalo suicid. Loše obiteljsko ozračje i psihijatrijski komorbiditet imali su znatnog udjela u suicidalnom ponašanju. U provedenom ispitivanju varijable vezane uz bolest nisu imale utjecaja na suicidalno ponašanje oboljelih od epilepsije.

Ključne riječi: *Epilepsija; Pokušaj suicida; Čimbenici bolesti; Obiteljsko ozračje; Komorbiditet*