

Psychical and psychological characteristics of patients with non-epileptic seizures

Hassan Awad, Jasmin Softić

Cantonal Institution for Fight Against Addiction Diseases, Zenica, Bosnia and Herzegovina

ABSTRACT

Aim To explore psychic and psychological characteristics of patients suffering from non-epileptic seizures and compare them with the patients suffering from epilepsy.

Methods Using medical documentation 40 patients with non-epileptic seizures were compared with 40 randomly selected epilepsy patients according to psychiatric and psychological report, and using psychotropic medications.

Results Both psychiatric and psychological reports have shown that pathologic changes were more frequently found within the epilepsy group ($n = 20$ and $n = 7$, respectively) than in non-epileptic fits group ($n = 18$ and $n = 4$, respectively). Six patients had neurotic disorders within the epilepsy group, versus 3 within the non-epileptic fits group. Conversion disorders were more frequently found within the non-epileptic group ($n = 6$) as compared to epilepsy group ($n = 2$). Disorders due to acute reaction to stress occurred in six patients in the non-epileptic fits group versus three patients in the epilepsy group. Cognitive disorders were found more frequently within the epilepsy group ($n = 6$) as compared to the non-epileptic fits group ($n = 1$). Vulnerable character, adolescence crisis, deficit of social abilities and indifference were more frequently found within the non-epileptic fits group ($n = 3$) in comparison with the epilepsy group ($n = 1$).

Conclusion Psychiatric and psychological reports are most important elements in the diagnostic of psychogenic non-epileptic seizures.

Key words: non-epileptic seizures, epilepsy, psychic and psychological characteristics.

Corresponding author:

Hassan RS Awad

Cantonal Institution for Fight against Addiction Diseases Zenica.

Aska Borica 28A, 72000 Zenica, Bosnia and Herzegovina

Phone/fax.: +387 32 244 544;

E-mail: hassanroshdy@yahoo.com

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INTRODUCTION

Patients suffering from transient alteration of consciousness are frequently found in everyday medical practice (3-5% in admitting ambulances) (1). At the Neurology Clinic of Sarajevo 7% of hospitalized patients in one year were admitted due to consciousness crisis (1). Recent estimates suggest that between 9% and 50% of patients referred to specialized epilepsy centers have paroxysmal events that, despite resembling true epileptic episodes, are actually non-epileptic (2).

Non-epileptic paroxysmal events are behavioral, motor, or sensory episodes that do not result from abnormal cortical electrical activity. They can mimic any type of epileptic seizures including simple partial, complex partial, and generalized tonic-clonic seizures. Non-epileptic paroxysmal events may be physiological or psychogenic in nature. In clinical practice, the most common imitators of epileptic seizures are syncope and psychogenic seizures (3). Non-epileptic paroxysmal seizures are different from epilepsy; these fits are not caused by abnormal cortical electrical activity (4).

Electroencephalogram (EEG) might be changed, but there are no specific epileptic graphic elements (5). Non-epileptic seizures are divided into two groups, physiological and psychological ones. Most patients suffer from psychogenic non-epileptic seizures while the lesser number suffers from physiologically caused seizures (5).

International Classification of Diseases (ICD), the tenth version, classifies psychogenic non-epileptic seizure (PNES) under dissociative disorders while diagnostic and statistical manual (DSM) IV classifies them under Somatoform Disorders as conversion disorders (6, 7). According to ICD10 definition, dissociation is a partial or complete loss of normal integration of memories from the past, awareness of identity, senses, and body movements (6).

Non-epileptic seizures may occur with people in all ages but most often in the age between 15 and 35 years (8). The majority of written studies claim that women are more frequently affected; some authors claim that the percentage of women suffering from non-epileptic fits reaches over 80% (9-11). Non-epileptic fits incidence is 1.4/100,000, and

3.4/100,000 aged 15-24 (12). The prevalence is higher with patients suffering from head trauma, or those suffering from cognitive or psychological disorders (13).

The aim of the research was to explore psychical and psychological characteristics of patients with consciousness crises admitted at the Neurology Clinic in Sarajevo (Clinic Centre) and compare them with those of epileptic seizures as well as characteristics of those who suffered from non-epileptic seizures.

PATIENTS AND METHODS

The study included all patients with diagnosis of consciousness crisis or epilepsy, who were admitted to the Department of Neurophysiology of the Neurology Clinic Sarajevo, Bosnia and Herzegovina in the period between 1 January 2006 and 5 October 2008. The study group consisted of 40 patients who were observed as those suffering from consciousness crisis and who were diagnosed with negative observation of epilepsy or convulsive dissociate disorder when leaving the hospital. The control group consisted of 40 randomly selected patients with confirmed diagnosis of epilepsy. According to the co-morbid psychiatric diagnosis all patients were classified into four groups: neurotic disorders, stress related disorders, somatic and dissociative conversion disorders, and other diagnoses. According to the psychological diagnosis patients were divided into several groups (cognitive function disorders, vulnerable character, adolescence crisis, social skills deficit and indifference character). The study compared 40 patients with non-epileptic seizures with 40 randomly selected epilepsy patients according to psychiatrics report (diagnosis), psychological report (diagnosis); the two groups were compared according to the use of psychotropic medications too. All observed patients were older than 18.

Inclusion criteria for our sample were the following: patients diagnosed with negative observation of epilepsy, patients diagnosed with conversion or dissociative disorder, and absence of a more serious psychological disorder (psychosis and serious cognitive damage). Criteria for exclusion were incomplete documentation and diagnosis in an outpatient clinic.

Statistical analysis was done using chi-square test with level significance of $p < 0.05$.

Table 1. Distribution of patients with epileptic/ non-epileptic seizures according to psychiatric reports

Psychiatric reports	No (%) of patients with		Total
	epileptic seizure	non-epileptic seizure	
Normal	7 (17.5)	5 (12.5)	12 (15.0)
Abnormal	20 (50.0) *	18 (45.0) *	38 (47.5)
Unknown	13 (32.5)	17 (42.5)	30 (37.5)
Total	40 (50.0)	40 (50.0)	80 (100.0)

*p=0.6151

RESULTS

In the period between 1 January 2006 and 5 October 2008 the Neurology Clinic of the University Clinical Centre of Sarajevo, Bosnia and Herzegovina, admitted 4,112 patients, 215 being epileptic, 44 had non-epileptic seizures, resulting in the prevalence rate of 5.2% and 1.1%, respectively.

Psychiatric reports have shown that pathological changes were more frequently found within the epilepsy group, in 20 (42.5%) patients, as compared to the non-epileptic fits group, 18 (32.5%) patients (p=0.6151) (Table 1). Psychological reports have shown that pathological changes were more frequently found within the epilepsy group, in seven patients (17.5%) as compared to the non-epileptic fits group, in four (10%) patients (p>0.05) (Table 2).

Neurotic disorders were more frequently found within the epilepsy group, in six patients (15%) as compared to the non-epileptic fits group, in the three (7.5%) cases. Conversion disorders were more frequently found within the non-epileptic fits than in the epilepsy group, in six (15%), and two (5%) cases, respectively. Disorders due to acute reaction to stress were more frequently found within the non-epileptic fits group than in the epilepsy group, in six (15%) and three (7.5%) cases, respectively (p=0.0259 and p<0.05, respectively) (Table 3).

Cognitive disorders were found more frequently within the epilepsy group, in six (15%) cases as compared to the non-epileptic fits group, in one (2.5%) case (p<0.05). Vulnerable character, adolescence crisis, deficit of social abilities and indi-

Table 2. Distribution of patients with epileptic/ non-epileptic seizures according to psychological reports

Psychological report	No (%) of patients with		Total
	epileptic seizure	non-epileptic seizure	
Normal	3 (7.5)	1 (2.5)	4 (5.0)
Abnormal	7 (17.5) *	4 (10.0) *	11 (13.7)
Unknown	30 (75.0)	35 (87.5)	65 (81.3)
Total	40 (50.0)	40 (50.0)	80 (100.0)

*p=0.332

Table 3. Distribution of patients with epileptic/ non-epileptic seizures according to psychiatric diagnosis

Psychiatric diagnosis	No (%) of patients with		Total
	epileptic seizure	non-epileptic seizure	
Normal	7 (17.5)	5 (12.5)	12 (15.0)
Unknown	20 (50.0)	18 (45.0)	38 (47.5)
Neurotic disorders	6 (15.0) *	2 (5.0) *	8 (10.0)
Stress related disorders	3 (7.5) *	6 (15.0) *	9 (11.25)
Dissociative conversion disorders	2 (5.0) *	6 (15.0) *	8 (10.0)
Other	1 (2.5)	2 (5.0)	3 (3.75)
Total	40 (50.0)	40 (50.0)	80 (100.0)

*p=0.0259

ference were more frequently found within the non-epileptic fits group than in the epilepsy group, three (7.5%) and one (2.5%) case, respectively (p=0.0425 and p<0.05, respectively) (Table 4). The usage of psychotherapy drugs (sedative drugs) were more frequently found within the non-epileptic fits group than in the epilepsy group, in five (12.5%) and one (2.5%) case, respectively (p=0.0001 and p<0.05, respectively) (Table 5).

DISCUSSION

According to the results of this study there was no statistically significant difference concerning frequency of all pathologic neuropsychiatric and psychological findings between the two groups (patients with non-epileptic seizures and those with epilepsy). However, concerning frequency of individual neuropsychiatric diagnoses and psychological findings there were statistically significant differences between the sample and control group.

Our study reported that patients with non-epileptic seizures have had more frequently personality disorders and somatoform disorders than

Table 4. Distribution of patients with epileptic/ non-epileptic seizures according to psychological diagnosis

Psychological diagnosis	No (%) of patients with		Total
	epileptic seizure	non-epileptic seizure	
Normal	3 (7.5)	1 (2.5)	4 (5.0)
Unknown	30 (75.0)	35 (87.5)	65 (81.3)
Dissociation in amnesic function	1 (2.5) *		1 (1.3)
Cognitive dysfunction	1 (2.5) *		1 (1.3)
Cognitive dysfunction and reduction in speeches function	1 (2.5) *		1 (1.3)
Mild mental retardation	1 (2.5) *		1 (1.3)
Vulnerable character – adolescence crisis	1 (2.5) *	1 (2.5) *	1 (1.3)
Cognitive dysfunction, deficit of social abilities		1 (2.5) *	1 (1.3)
Deficit of social abilities		1 (2.5) *	1 (1.3)
Indifference, insomnia, qualm		1 (2.5) *	1 (1.3)
Cognitive dysfunction and affective distortion	1 (2.5) *		1 (1.3)
Total	40 (50.0)	40 (50.0)	80 (100.0)

*p=0.0425

Table 5. Distribution of patients with epileptic/ non-epileptic seizures according to the usage of psychotropic medications

Psychotropic medications	No (%) of patients with		Total
	epileptic seizure	non-epileptic seizure	
None	20 (50.0)	33 (82.5)	53 (66.3)
Antiepileptic therapy	15 (37.5)	0 (0.0)	15 (18.7)
Psychiatric therapy	1 (2.5)*	5 (12.5)*	6 (7.5)
Antiepileptic therapy and psychiatric	2 (5.0)	1 (2.5)	3 (3.7)
Unknown	2 (5.0)	1 (2.5)	3 (3.7)
Total	40 (50.0)	40 (50.0)	80 (100.0)

*p=0.0001

patients with epilepsy, which is in concordance with the results of Galimberti et al (14). Sometimes personality disorders are found in patients suffering from epilepsy with comorbidity with non-epileptic seizures (15).

The results of this study have shown that the patients with epilepsy have experienced significantly more frequently anxiety, which is in contrast with the results of other studies in which patients suffering from psychogenic non-epileptic seizures reported more frequently anxiety and depressions than epileptic patients (16).

Our finding that post-traumatic stress disorder was far more frequently found in patients suffering

from non-epileptic seizures is in concordance with findings of other researches. For example, Alesio et al found that hospitalizations at psychiatric departments, psychopharmacotherapy, dissociative disorders and post-traumatic stress disorder (PTSD) were far more frequently found in patients suffering from non-epileptic fits only (17), and Fiszman et al found that PTSD presence was higher in non-epileptic seizures patients than control group (18).

The patients suffering from psychogenic non-epileptic seizures reported more frequently anxiety and depression than the epileptic patients (15), and the results of this study confirmed this finding.

In conclusion, the patients with non-epileptic seizures have personality disorders and somatoform disorders, post-traumatic stress disorder and depression more frequently than patients with epilepsy, but the patients with epilepsy experience more anxiety.

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Psihičke i psihološke karakteristike pacijenata s neepileptičkim napadima

Hassan Awad, Jasmin Softić

Kantonalni zavod za borbu protiv bolesti ovisnosti Zenica, Bosna i Hercegovina

SAŽETAK

Cilj Ispitati psihičke i psihološke karakteristike pacijenata s neepileptičkim napadima i uporediti ih s pacijentima s potvrđenom epilepsijom.

Metode Koristeći nalaze psihijatra i psihološke evaluacije, uspoređeno je 40 pacijenata s dijagnozom psihogenih neepileptičkih napada s 40 pacijenata s potvrđenom dijagnozom epilepsije.

Rezultati Nalazi psihijatra i psihologa pokazali su da su patološke promjene bile češće u grupi pacijenata s epilepsijom ($n=20$, odnosno, $n=7$), u poređenju s grupom pacijenata s neepileptičkim napadima ($n=18$, odnosno, $n=4$). Šest pacijenata s epilepsijom, odnosno tri pacijenta s neepileptičkim napadima, imali su neurotične poremećaje. Konverzivni poremećaji bili su češće prisutni u grupi pacijenata s neepileptičkim napadima ($n=6$) u odnosu na grupu epileptičara ($n=2$). Akutnu reakciju na stres imalo je šest pacijenata s neepileptičkim napadima, a samo tri pacijenta s epilepsijom. Kognitivne disfunkcije bile su prisutnije kod pacijenata s epilepsijom ($n=6$) u poređenju s pacijentima s neepileptičkim napadima ($n=1$). Vulnerabilna ličnost, adolescentna kriza, deficit socijalnih vještina, te indiferentnost, bili su prisutniji kod pacijenata s neepileptičkim napadima ($n=3$) u odnosu na grupu epileptičara ($n=1$).

Zaključak Nalazi psihijatra i psihologa su važni kod uspostavljanja dijagnoze psihogenih neepileptičkih napada.

Ključne riječi: psihogeni neepileptički napadi, epilepsija, psihičke i psihološke karakteristike