Prevalence of Depression among Epileptic Patients at Phramongkutklao Hospital

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Objectives: *To determine the prevalence of depression among epileptic patients in Phramongkutklao Hospital and to find the factors associated with depression.*
Material and Method: *One hundred and ten epileptic patients were enrolled and 60 patients met the inclusion criteria. These subjects were screened with Thai Geriatric Depressive Scale (TGDS) and were interviewed. Demographic data that effect depression were evaluated.*
Results: *During the 1-year study period, 60 of 110 patients diagnosed epilepsy were eligible. Prevalence of depression was 38.3%, which is similar to previous studies. Mild depression was found in 65.2% and moderate 34.8%, without severe depression. Comparing between male and female, there was no statistical significant difference (p = 0.75). The age group that compared between age equal or less than 25 years and more than 25 years had no statistical significant difference (p = 0.77). Other variables were not found to be significant risk factors of depression among epileptic patients including duration of seizures [equal or less than 5 and more than 5 per year (p = 0.43)], type of seizures [generalized tonic-clonic seizures and partial seizures (p = 0.69)], and number of antiepileptic drugs [monotherapy and polytherapy (p = 0.44)].*
Conclusion: *Prevalence of depression among epileptic patients was 38.3%, divided between mild (65.2%) and moderate (34.8%). There were no significant risk factors correlated with depression. Epileptic patients should be made aware of this and seek prompt treatment for depression.*

Keywords: *Depression, Epileptic patient, Prevalence*

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Depression is a clinical important concomitant of epilepsy. A link between the two states was described by Hippocrates: "Melancholics ordinarily become epileptics and epileptic melancholics"[1]. Depression is more often seen in epilepsy than in the general population[2-6]. There are no clearly established mechanisms by which epilepsy may bring about clinical depression. A number of studies have examined depression in epilepsy, however, patients were recruited from various sources, ranging from the community to specialist neuropsychiatric clinics and various specific treatments[7]. Because major depression is not routinely assessed in neurology clinics[8], and most affected patients are not subsequently treated[9], substantial opportunity exists to improve the quality of care for many people with epilepsy. The prevalence of depressive disorders is reported to be about 20-55% among epileptic patients[10-13]. These rates seem to be higher than in other chronic non-neurological illnesses[14], and could be associated with specific underlying brain dysfunction[15-18]. Depression is a strong predictor of self-perceived health status, independent of seizure rate[19-22], and is associated with increased healthcare costs of epilepsy[23]. The objective of the present study was to determine the prevalence of depression among epileptic patients in the outpatient clinic at Phramongkutklao Hospital and to find factors associated with depression.

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Material and Method

The present study was a cross-sectional study. Epileptic patients in the neurological outpatient clinic during the period January to September 2005 were enrolled. All patients were interviewed for demographic and personal history. For enrollment, inclusion criteria were age 18 years or older, current diagnosis of epilepsy requiring treatment with one or more antiepileptic drugs, and stable dosage of the antiepileptic drugs for at least the previous 30 days. Exclusion criteria were psychiatric co-morbidity, post-stroke aphasia, and hearing loss. The study protocol and informed consent documents were approved by the ethical committee. Patients provided written informed consent before the study.

For screening for depression: according to the present study, all were interviewed by the Thai Geriatric Depressive Scale (TGDS)[24] and evaluated by neurologists.

Statistical analysis

The continuous data was assessed by mean, range, and standard deviation (SD). The discrete data were assessed in number and percent. Chi-square test and Fisher's exact test were analyzed for determining the difference between the depressed group and the non-depressed. P-value < 0.05 represented statistically significant difference. Statistical analysis was assessed by statistic program, SPSS version 11.5.

Results

During the 1-year study period at the Neurological outpatient clinic, Department of Medicine, Phramongkutklao Hospital, sixty eligible patients were enrolled from the 110 epileptic outpatients. The authors found depression in 23 cases, so prevalence of depression was 38.3%. Depression was diagnosed 36.8% among males and 40.9% among females. Comparison between age group (≤ 25 and > 25 years old), depression was found 41.2% and 37.2% respectively. Other different characteristics such as duration of seizures diagnosis, type of seizures, and effect of number of antiepileptic drugs had prevalence of depression in a range of 33.3%-46.6%. The details of each parameter are shown in Table 1.

Severity of depression was categorized into mild (TGDS 13-18), moderate (TGDS 19-24) and severe (TGDS 25-30). No severe depression was found in the present series. Most of the presented patients had a mild degree of depression. However, almost half of male, age less than 25 years, duration less than 5 years and generalized tonic-clonic seizures population showed increasing numbers of moderate depression. Table 2 illustrates the detail of numbers and percentages of variables and degree of depression.

Comparison between sexes, different age groups, duration of seizures diagnosis, type of seizures, and number of antiepileptic drugs showed that there was no factor (p-value 0.75, 0.77, 0.43, 0.69, and 0.44 respectively) that influenced depression among the presented epileptic patients (Table1).

Discussion

During the 1-year study period, 60 patients who were diagnosed with epilepsy were eligible. Prevalence of depression was 38.3% that is similar to previous

Table 1. Rate of depression in 60 epileptic patients

Variables		Depression	No depression	%	p-value
Sex	Male	14	24	36.8	0.75
	Female	9	13	40.9	
Age	≤ 25 years	7	10	41.2	0.77
	> 25 years	16	27	37.2	
Duration	≤ 5 years	10	20	33.3	0.43
	> 5 years	13	17	43.3	
Type of seizures	GTCS	17	29	36.9	0.69
	PS	6	8	42.9	
AEDs	Monotherapy	16	29	35.6	0.44
	Polytherapy	7	8	46.6	
Total		23	37	38.3	

Note: Using: Chi-square with Yate's correction
GTCS = Generalized tonic-clonic seizures; PS = Partial seizures; AEDs = Antiepileptic drugs

Table 2. Association of variables and degree of depression

Variables		Mild	Moderate	Total
Sex	Male	8 (57.1%)	6 (42.9%)	14
	Female	7 (77.8)	2 (22.2%)	9
Age	≤ 25 years	3 (42.9%)	4 (57.1%)	7
	> 25 years	12 (75%)	4 (25%)	16
Duration	≤ 5 years	6 (60%)	4 (40%)	10
	> 5 years	9 (69.2%)	4 (30.8%)	13
Type of seizure	GTCS	10 (58.8%)	7 (41.2%)	17
	PS	5 (83.3%)	1 (16.7%)	6
AEDs	Monotherapy	10 (62.5%)	6 (37.5%)	16
	Polytherapy	5 (71.4%)	2 (28.6%)	7
Total		15 (65.2%)	8 (34.8%)	23

studies. Mild depression was 65.2% and moderate was 34.8%. Interestingly, there was no severe depression. Grabowska-Grzyb A et al[25] studied the risk factor for depression in partial epilepsy in 100 of 203 patients with epilepsy who suffered from concurrent depression (49.3%) and found that 76 of them had severe depression (37.4%) and 24 had mild depression (11.8%). Complex partial seizures and absence with secondary generalized tonic-clonic seizures were found to be the risk factors for depression.

In women, the effect of estrogens on hippocampal synaptogenesis was parallel to those of antidepressants. Moreover, loss of estrogen appears to be a critical contributor to the etiology of depressive disorders. The increased incidence of depression observed in women with epilepsy might therefore reflect a hormonal deficiency state because epilepsy is frequently associated with defects in reproductive function[26].

Conclusion

Prevalence of depression among the presented epileptic patients was 38.2%, mild (65.2%) and moderate (34.8%). No demonstration of any variables such as sex, age group, duration of disease, type of seizures, and number of antiepileptic drugs showed a correlation with depression. Epileptic patients should be recommended to find prompt treatment if they have depression.

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ความชุกของภาวะซึมเศร้าในผู้ป่วยโรคลมชักในโรงพยาบาลพระมงกุฎเกล้า

สามารถ นิธินันทน์, โยธิน ชินวลัญช์, พาสิริ สิทธินามสุวรรณ, เจษฎา อุดมมงคล, จิตถนอม สุวรรณเตมีย์, วรรณา วงศ์เมฆ, สีมา ศุภเกษม

วัตถุประสงค์: *เพื่อหาความชุกและปัจจัยเสี่ยงของภาวะซึมเศร้าในผู้ป่วยลมชักในโรงพยาบาลพระมงกุฎเกล้า*
วัสดุและวิธีการ: *คัดเลือกผู้ป่วยจากผู้ป่วยลมชักทั้งสิ้น 110 คน ในระหว่างเดือนมกราคม พ.ศ. 2548 ถึง เดือนกันยายน พ.ศ. 2548 โดย 60 คนมีคุณสมบัติตามเกณฑ์การคัดเลือกผู้ป่วยทั้ง 60 คนจะได้รับการสัมภาษณ์คุณสมบัติพื้นฐาน และตรวจโดยแบบสอบถาม Thai Geriatric Depression Scale (TGDS)*
ผลการศึกษา: *ระยะเวลา 1 ปีที่ทำการวิจัย ผู้ป่วยที่เข้าการศึกษามี 60 คน พบอุบัติการณ์ของภาวะซึมเศร้าร้อยละ 38.3 ซึ่งใกล้เคียงกับข้อมูลจากการศึกษาอื่น ในผู้ป่วยที่มีภาวะซึมเศร้าพบอาการระดับน้อย ร้อยละ 65.2 และระดับปานกลาง ร้อยละ 34.8 โดยไม่พบระดับรุนแรง หลังจากทำการศึกษาเปรียบเทียบปัจจัยต่างๆเพื่อหาปัจจัยเสี่ยงต่อภาวะซึมเศร้า ไม่พบปัจจัยใดเป็นปัจจัยเสี่ยงที่มีนัยสำคัญทางสถิติ ไม่ว่าจะเป็น เพศ [ชาย เทียบกับหญิง (p = 0.75)] อายุ [≤ 25 เทียบกับ > 25 ปี (p =0.77)] ระยะเวลาของการป่วยเป็นโรคลมชัก [≤ 5 ปี เทียบกับ > 5 ปี (p = 0.43)] ลักษณะชัก [ชักทั้งตัว เทียบกับชักเฉพาะที่ (p = 0.69)] และจำนวนของยากันชักที่ผู้ป่วยได้รับ [ยาชนิดเดียว เทียบกับยามากกว่า 1 ชนิด (p = 0.44)]*
สรุป: *ความชุกของภาวะซึมเศร้าในผู้ป่วยโรคลมชักในโรงพยาบาลพระมงกุฎเกล้า พบร้อยละ 38.2 โดยมีระดับ ความรุนแรงน้อยร้อยละ 65.2 และระดับความรุนแรงปานกลางร้อยละ 34.8 ไม่พบความสัมพันธ์ของปัจจัยใดๆ กับภาวะนี้ไม่ว่าจะเป็น เพศ กลุ่มอายุ ระยะเวลาที่เป็นโรคลมชัก ลักษณะชัก และจำนวนยากันชักที่ได้รับ ภาวะซึมเศร้าเป็นภาวะที่ควรค้นหาในผู้ป่วยโรคลมชักและให้การรักษาที่เหมาะสมร่วมกับการรักษาหลัก*