NEUROLOGICAL DEPRESSION DISORDERS INVENTORY FOR EPILEPSY (NDDI-E) di POLIKLINIK SARAF RSUP PROF. DR. R. D. KANDOU MANADO

NEUROLOGICAL DEPRESSION DISORDERS INVENTORY FOR EPILEPSY (NDDI-E) OF NEUROLOGY CLINIC IN RSUP PROF. DR. R. D. KANDOU MANADO

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ABSTRAK

Latar belakang: Depresi adalah salah satu gejala komorbid yang sering terjadi pada penderita epilepsi. **Tujuan:** Penelitian ini bertujuan untuk mengetahui sebaran depresi pada penderita epilepsi di poliklinik saraf RSUP Prof. Dr. R. D. Kandou Manado. **Metode:** Penelitian ini merupakan penelitian potong lintang. Penderita epilepsi yang datang berobat ke Poliklinik Saraf RSUP Prof. Dr. R. D. Kandou Manado bulan April sampai Juni 2017 yang telah memenuhi kriteria inklusi dan eksklusi dilakukan anamnesis, pemeriksaan fisik, pemeriksaan EEG, dan diminta mengisi kuesioner NDDI-E (*Neurological Depression Disorders Inventory For Epilepsy*). Hasil dianalisis menggunakan perangkat lunak SPSS versi 22. Diagnosis depresi ditegakkan menggunakan skor NDDI-E versi bahasa Indonesia yang telah divalidasi. **Hasil penelitian:** Terdapat 30 subjek pada penelitian ini, perempuan lebih banyak (53,33%). Median usia adalah 25 (16-53) tahun. Median lamanya menderita epilepsi adalah 5 (1-30) tahun. Mayoritas subjek menderita epilepsi lobus temporal (76,67%) dan sisanya epilepsi lobus frontal. Sebanyak 83,67% penderita epilepsi mempunyai komorbid depresi. Diagnosis depresi mayor (depresi yang dinilai berdasarkan NDDI-E ≥11) didapatkan sebanyak 26 orang (86,67%). Depresi terdapat pada 86,96% epilepsi lobus temporal dan 85,71% epilepsi lobus frontal. **Kesimpulan:** Penderita epilepsi di poliklinik saraf RSUP Prof. Dr. R. D. Kandou Manado mempunyai komorbid depresi yang tinggi.

Kata kunci: *epilepsi, depresi, Manado, NDDI-E.*

ABSTRACT

Background: *Depression is one of the common comorbid symptoms in epilepsy patients.* ***Objective:*** *This study aims to determine the distribution of depression of epilepsy patients of neurology clinic in RSUP Prof. Dr. R. D. Kandou Manado.* ***Method:*** *This study is a cross sectional study. Epilepsy patients who came to neurology clinic in RSUP Prof. Dr. R. D. Kandou Manado from April to June 2017 who have met the inclusion and exclusion criteria, anamnesis, physical examination, EEG examination, and asked to fill out the NDDI-E (Neurological Depression Disorders Inventory For Epilepsy) questionnaire. The results were analyzed using SPSS software version 22. Diagnosed depression is enforced using the score of NDDI-E validated Indonesian version.* ***Result:*** *There are 30 subjects in this study, more women (53.33%). The median age is 25 (16-53) years. Median duration of epilepsy is 5 (1-30) years. The majority of subjects suffered temporal lobe epilepsy (76.67%), and the rest of the frontal lobe epilepsy. As many as 83.67% of epilepsy patients have comorbid depression. Major depression (depression assessed by NDDI-E Test ≥11) was found as many as 26 people (86,67%). Depression is present in 86.96% temporal lobe epilepsy and 85.71% frontal lobe epilepsy.* ***Conclusion:*** *Epilepsy patients of neurology clinic in RSUP Prof. Dr. R. D. Kandou Manado have a high comorbid depression.*

Keyword**:** *epilepsy, depression, Manado, NDDI-E.*

INTRODUCTION

Epilepsy is one of the oldest neurological diseases, found in all ages. Allegedly there are about 50 million people with epilepsy in the world (WHO 2012). The population of active epilepsy (patients with uncontrolled seizures or who require treatment) is estimated between 4 to 10 per 1000 population per year, in developing countries estimated at 6 to 10 per 1000 population.[1]

In Indonesia there is no definitive data on epilepsy patients, but it is estimated that there are 1-2 million epilepsy patients. The prevalence of epilepsy in Indonesia is 5-10 cases per 1.000 people and the incidence of 50 cases per 100.000 people per year.[2] From the results of research conducted in the Neurology Policlinic Prof. Dr. R. D. Kandou Manado from January 1, 2016 to December 31, 2016, found that new epilepsy patients not hospitalized accounted for 12.61% of all neurological disease patients not hospitalized.[3] But to date there is no basic data on depression of epilepsy patients in Manado.

Depression is one of the common comorbid symptoms of epilepsy patients. The occurrence of depressive symptoms of epilepsy patients is an expression of several pathogenic mechanisms: neurochemical and neurophysiological changes occurring within the limbic structure in the course of epileptogenesis, iatrogenic processes (negative psychotropic properties of antiepileptic drugs, epilepsy surgery), a reactive process against chronic disorders and genetic risk factors. The prevalence of depression of epilepsy patients has been estimated between 9 to 62%. The literature remains convincing about the risk factors for depressive disorders of epilepsy. Depression comorbidity of epilepsy affects negatively in quality of life, increases suicide risk, and costs of medical care when compared to patients without selective depression inhibitors Serotonin reuptake Selective serotonin and norepinephrine reuptake inhibitors and first-line treatment of depression of epilepsy patients.[4]

One way to detect depression in epilepsy is to use a validated Neurological Depression Disorders Inventory For Epilepsy (NDDI-E) instrument. This examination may help to detect early depression of epilepsy patients of neurology clinic.[5]

Because enough people of depression of epilepsy patients and this disease became a health problem in the community so motivated to conduct research on Depression Disorders in Epilepsy Patients of neurology clinic in RSUP Prof. R. D. Kandou Manado. The purpose of this study was to determine the depression of epilepsy patients of

neurology clinic in RSUP Prof. Dr. R. D. Kandou Manado.

RESEARCH METHODS

Design, Place, and Time of Research.

This research uses cross sectional design. All epilepsy patients treated in the neurology clinic of RSUP Prof. Dr. R. D. Kandou Manado who fulfilled the inclusion and exclusion criteria were given validated NDDI-E (*Neurological Depression Disorders Inventory For Epilepsy*) version of Indonesian. The study was conducted in the April-June 2017.

Population and Sample Research.

The population of the study were all epilepsy patients who came to the neurology clinic of Prof. Dr. R. D. Kandou Manado.

The selected sample was 30 people with criteria:

- Inclusion Criteria:

1. All epilepsy patients ≥16 years.
2. Get antiepileptic drug treatment.
3. Can speak Indonesian.
4. Diagnosis confirmed with a definite EEG examination.

- Exclusion Criteria:

1. Experiencing mental retardation, Organic Mental Disorders, and using drugs.
2. Blurred vision and hearing impairment.
3. Patients who are not willing to sign a letter of consent.

Operational definition.

1. The division of two biologically determined and anatomically determined sexes attached to a particular gender. Viewed from student card or ID card.

Category:

- Man.
- Women.

2. Epilepsy is defined as a condition characterized by a seizure condition repeated over a period of time over 24 hours arising without provocation.

3. Depression is a condition more than a state of sadness, when a person's depression conditions to cause disruption of daily social activities then it is referred to as a Depression Disorder. Some symptoms of Depression Depression is a feeling of sadness, excessive fatigue after usual routine activities, lost interest and passion, lazy activities, and sleep patterns disorder. Depression is one of the major causes of suicide events detected when NDDI-E ≥ 11.

Work Methods.

Patients with an epilepsy diagnosis that meets the inclusion and exclusion criteria are examined

physically and anamnesis. Demographic data were obtained from the medical record, then all of the research sample candidates were first given a verbal explanation of the research objectives and work methods, when they understood and agreed to participate in the study and then they were asked to sign a letter of consent, then the Indonesian version of NDDI-E questionnaire was distributed to patients diagnosed with epilepsy in the neurology clinic RSUP Prof. Dr. R. D. Kandou Manado, followed by NDDI-E examination by patient filling out their own questionnaire, and the result was concluded by the researcher.

Statistic analysis.

Categorical data is displayed in numbers and percentages. For data analysis used SPSS version 22.

Assess Research Ethics.

All epilepsy patients are informed of the research objectives. They have the right to decide whether or not to participate in the research.

RESEARCH RESULT

Of all 127 epilepsy patients who went to the neurology clinic of Prof. Dr. R. D. Kandou Manado from April to June 2017 was obtained thirty (30) epilepsy patients who had met inclusion and exclusion criteria. From the results of the questionnaires distributed to the respondents and through the results of manual calculations with the standard score NDDI-E ≥11 will be diagnosed with depression. It was found that twenty six (26) study subjects were depressed and four (4) subjects did not experience depression.

TABLE 1. CHARACTERISTICS SAMPLE OF EPILEPSY PATIENT OF CLINIC NEUROLOGY RSUP PROF. DR. R. D. KANDOU MANADO (Total N=30)

Characteristics Sample	Not Depression (N=4)		Major depression (N=26)	
	N	Percentage (%)	N	Percentage (%)
Gender				
Men	2	50	12	46.15
Women	2	50	14	53.85
Age (Years)				
16-25	2	50	13	50
26-35	0	0	5	19.23
36-45	2	50	3	11.54
46-55	0	0	5	19.23
Job				
College student	0	0	2	7.7
Student	0	0	8	30.77
Employees	1	25	7	26.92
Housewife	1	25	6	23.07
Doesn't work	2	50	3	11.54
NDDIE				
<11	4	100	0	0
≥11	0	0	26	100
Type of Epilepsy				
TLE	3	75	20	76.92
FLE	1	25	6	23.08
Age of Onset (Years)				
1-10	0	0	3	11.54
11-20	2	50	15	57.69
21-30	1	25	2	7.69
31-40	1	25	2	7.69
41-50	0	0	4	15.39
Social Status				
Single	2	50	18	69.23
Married	2	50	8	30.77
Age of Suffered (Years)				
1-5	2	50	15	57.69
6-10	1	25	8	30.77
11-15	1	25	1	3.85
16-20	0	0	1	3.85
21-25	0	0	0	0
26-30	0	0	1	3.85

TLE = Temporal Lobe Epilepsy

FLE = Frontal Lobe Epilepsy

DISCUSSION

Epilepsy is a disorder associated with the central nervous system, characterized by a seizure spasm caused by hyperactivity of electrical charges from the brain neurons spontaneously.[6] Depression is a psychopathologically sad feeling in which depression can be a

symptom (syndrome) and may also be a union of nosologiic disease.[7]

Depression in epilepsy are two disorders that have an impact on morbidity and mortality in patients of each of these disorders. The unfortunate thing is that both disorders can arise in one patient and this condition is called comorbidity. And it not only increases morbidity and mortality issues but raises new problems such as the increasing complexity of handling the problem.[8]

Depression disorder is a common disorder in epilepsy patients. It is a comorbid condition that can degrade the quality of life and potentially leads to suicidal habits in epilepsy patients.[9] A depression is a mood disorder. This is more common in people with epilepsy than among people who do not have epilepsy or have other neurological conditions.[10] Currently, assessment of depressive disorders is not a routine examination of neurology clinics, and the facts also prove that some patients who suffered from an undetectable depressive disorder early so that it was not treated. Detection of depression of epilepsy patients is quite difficult if no hospitalized because required many times. Therefore, a short and simple but reliable examination is necessary to detect depressive disorders in epilepsy patients. This study was conducted in Manado to see the frequency and description of each statement to be a reference in examining depression in people with epilepsy.[9] Detection of depression increased almost 10 times using this NDDI-E instrument. Although NDDI-E is not to replace a definitive evaluation, this examination may help detect early depression in epilepsy patients no hospitalized.[9]

In this study within a period of 3 months found 30 epilepsy patients who no hospitalized in the neurology clinic RSUP Prof. Dr. R. D. Kandou Manado meeting the inclusion criteria. Of the total number, based on the examination using NDDI-E questionnaires, 26 people were depressed. Of the 26 patients who suffered from depression, consisted of 14 women (53.85%) and 12 men (46.15%). This is consistent with previous studies that also suggest that major depressive disorders in epilepsy patients were higher in 71% of women and Daniela Di Capua (2012) in Spain 72% of women, Yukari Todokoro (2012) in Japan gained 58.3% and De oliveira in Brazil (2010) 70%.[11]

Age obtained from the results of this study who experienced depression ranged between 16-53 years, with the youngest age 16 years and the oldest 53 years. While in epilepsy patients who experienced the most depression ranged between 16-25 years.

In the occupational status category, from 26 depressed patients, there were 8 people who had a student job, 6 were housewifes, 7 were private / civil servants, 3 did not have jobs, and 2 of them were college students .

Of all cases of depressed epilepsy patients, most were women (53.85%). The majority of patients are in the age group 16-25 years (50%). The majority of epilepsy patients had 30.77%, unmarried (69.23%) of the study, in Temporal Lobe Epilepsy (76.92%), and the most onset of epilepsy in the 11-20 year age group (57.69%).

This study also has some of weakness: no long-term follow-up of epilepsy patients experiencing depression, too few samples, too short time, a definite diagnosis should be with EEG examination that makes the sample less, patient's ignorance of early symptoms of depression, not yet there is an exclusion factor that excludes other depressed comorbidities, the outcome of depression in temporal lobe epilepsy and frontal lobe epilepsy was not significant because age of onset was not associated or not assessed in the study. While the advantages of this research is as far as the knowledge of researchers that this study is the first study to discuss depression with epilepsy in Manado.

CONCLUSION

Epilepsy patients of neurology clinic RSUP Prof. Dr. R. D. Kandou Manado has high comorbid depression. Depression can be caused by various factors, not only epilepsy.

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