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Evaluation of Post-Stroke Depression in the Neurology Department of the Mongi Ben Hmida National Institute of Tunis

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Abstract

Introduction: *A stroke is potentially responsible for a major alteration in the quality of life of patients, not only because of the physical handicaps it is likely to generate but also because of the cognitive and mood consequences. Depression is one of the least documented complications of stroke in Africa. The aim of this study is to evaluate the prevalence of post-stroke depression in the neurology department of the Mongi Ben Hmida National Institute in Tunis.*

Method: *This is a descriptive quantitative study carried out among 55 patients followed for stroke in the neurology department of Mongi Ben Hmida hospital, from January 15 to March 19, 2024. The data were collected using the SADQ-H questionnaire and analyzed using SPSS-22 software.*

Result: *The results showed that 47 of the 55 patients, or 85%, presented a depressed mood (had a score greater than 18, the optimal threshold for detecting depression). The average age of the patients was 62.50 years. Female subjects represented 53.2% of cases of depression, or 25 patients. None of the patients in our sample had a psychiatric history.*

Conclusion: *Depression after stroke has a direct impact on patients' quality of life and their functional recovery. It would therefore be necessary to prevent this depression by implementing systematic and early screening for all post-stroke patients.*

Keywords: *Stroke, Depression, SADQ-H, Tunisia*

1. Introduction

Stroke represents a major cause of morbidity and is the leading source of disability worldwide [1,2]. Stroke is the 3rd cause of death after coronary accidents and cancers in developed countries and the 2nd cause of death in developing countries [3].

The complications of stroke are numerous; among these, the neurological after-effects are often disabling, leading to a severe loss of functional and physical autonomy [4]. Strokes also lead to psychiatric complications including post-stroke depression. It affects 30 to 50% of patients during the first year following a stroke and increases the risk of mortality and morbidity [5, 6]. Despite its importance, post-stroke depression remains a neglected pathology [7,8]. This is all the more regrettable since its diagnosis and treatment improve not only the depressive state and the quality of life of patients, but also their functional prognosis [8].

The aim of this study is to evaluate the prevalence of post-stroke depression in the neurology department of the Mongi Ben Hmida National Institute in Tunis.

2. Methods

This was a cross-sectional study, carried out over a period from January 15 to March 19, 2024 at the neurology department of the Mongi Ben Hmida National Institute of Neurology in Tunis. This study concerned all patients with stroke, confirmed by brain computed tomography. We excluded from our study patients with recurrent stroke, transient vascular accident, personal psychiatric history, and vigilance disorder.

Survey data was collected from patients and from medical records. A questionnaire was established, including sociodemographic data,

medical and psychiatric history (family and personal), and data concerning the stroke.

We also used a SADQ-H measuring instrument. This questionnaire was translated into Arabic using the "Reverse-Translation" method. Data entry and analysis were carried out using SPSS-22 software.

3. RESULTS

3.1. Frequency of Post-Stroke Depression

Initial analyzes of questionnaire results were performed on all 55 patients to assess the prevalence of post-stroke depression. The results showed that 47 of the 55 patients, or 85%, presented a depressed mood (had a score above 18, the optimal threshold for detecting depression).

3.2. Post-Stroke Depression and Socio Demographic Data

The average age of our patients with depressed mood was 62.50 years. The majority of patients were female (25 women; 53.2%), married (28 cases 59.6%), divorced (12 cases 25.3%) and widowed in 14.9% of cases. 36.2% of patients are illiterate. 29.8% of patients have a primary level. In terms of occupation, 25.5% were laborers or day laborers, 12.8% were employees, 31.9% were housewives and 29.8% were retired. The socio-economic level of patients was low in 31.9% of cases. No correlation was revealed between these data and post-stroke depression (Table 1).

Table 1. *Sociodemographic characteristics of depressed patients*

Variables	*Number (n=47)*	*Percentage (%)*	*P*
Age			
[40-55[	12	25,5	
[55-70[	23	49,0	0,09
[70-85[	12	25,5	
Gender			
Feminine	25	53,2	
Male	22	46,8	0,8
Occupation			
Worker	12	25,5	
Employee	6	12,8	
Retirement	14	29,8	0,053
Housewife	15	31,9	
Marital status			
Married	28	59,6	
Divorce	12	25,3	
Widower	7	14,9	0,6
Socio-economic level			
Down	15	31,9	
AVERAGE	23	48,9	0,3
GOOD	9	19,2	
Level of study			
Illiterate	17	36,2	
Primary	14	29,8	0,7
Secondary	12	25,5	
University	4	8,5	

3.3. Post-Stroke Depression and Clinical Data

Among patients with post-stroke depression, 87% had an illness duration of less than one year, while 13% had been ill for a year or more. Medical history was present in 56.4% of patients, compared to 43.6% without medical history. Concerning the type of stroke, 85.1% of depressed patients had an ischemic stroke and 14.9% a hemorrhagic stroke, with a significant correlation between post-stroke depression and the type of stroke ($p = 0.02$).

Table 2. *Clinical data of depressed patients*

Variables	*Number (n=47)*	*Percentage (%)*	*P*
Duration of illness			
>1 year	8	17,0	0,3
<1 year	39	83,0	
Medical ATCDs			
Yes	31	56,4	0,5
No	24	43,6	
Type of stroke			
Ischemic	40	85,1	
Hemorrhagic	7	14,9	0,02

3.4. Depression and Time to Stroke

According to our results, the frequency of depression varied between 4.3% and 42.5% depending on the time since the stroke. It was higher before one month and beyond one year after the stroke (Table 3).

Table 3. *Depression and time to onset of stroke*

variables	*Number (n=47)*	*Percentage (%)*
Time of occurrence		
<= 1 month	20	42,5
Between 1 and 6 months	12	25,5
Between 6 and 12 months	2	4,3
>1 year	13	27,7

3.5. Consultation with a Psychiatrist

Only 6.4% of patients had consulted a psychiatrist while 93.6% had not.

DISCUSSION

In our study, the prevalence of post-stroke depression was 85%. Our result is similar to that of a cross-sectional study which took place in the neurology departments of the Friendship Hospital and the psychiatry departments of the general hospital in Bangui in Africa. This study revealed that the prevalence of post-stroke depression was 88.6% (31 out of 35 patients) [9]. However, Ojagbemi et al [10] who found in a meta-analysis, a prevalence of 31% in Africa south of the Sahara. Hackett et al [11] reached another result in their meta-analysis. In Egypt, the prevalence was 36.9% [12]. However, this prevalence is very variable [13]. In a preliminary study carried out in 2020 in the medicine department of Bamako with a prevalence of 33.33% and 38.9% in 2012 in the neurology department of Yalgado Ouédraogo University Hospital by Napon et al [14]. This could be explained by the variability of post-stroke depression diagnostic scales, inclusion criteria and the size of the different populations studied. Engedal, Kirkevold, and colleagues. (2011) stated that the onset of depression after a stroke is sudden following what the patient faces with the physical inability to do daily activities and especially simple activities, disability, etc. [15].

Our study highlighted a female predominance (53.2%). This result is consistent with the conclusions of certain authors [16, 17] who described female gender as a risk factor for post-stroke depression. However, Khedr et al. [18] did not find a link between post-stroke depression and gender.

We did not observe a statistically significant association between the occurrence of post-stoke depression and sociodemographic factors such as age, marital status and socioeconomic level. This same observation has been reported by other authors around the world [19, 20].

Regarding the type of stroke, our study found that the majority of selected patients, suffering from ischemic stroke, accounted for 85.1% of cases, while those with hemorrhagic stroke were 14.1%. In the literature ischemic stroke is most often found. The study carried out in Mali in 2020 found a high incidence of post-stoke depression in patients with ischemic stroke (83.64%) [14]. Another study conducted in 2022 presented similar results, with 62.96% of patients with post-stroke depression presenting an ischemic stroke, and 37.03% a hemorrhagic stroke [21].

Only 6.4% of patients had consulted a psychiatrist, which is insufficient given the psychological issues linked to this pathology. Psychiatric monitoring can help to better manage the emotional and mental consequences of stroke, thus improving patients' quality of life

and facilitating their overall recovery. A study conducted at Maastricht University Hospital in the Netherlands showed that one month after a stroke, all patients had a psychiatric evaluation [22].

4. Limitations of the Study

The sample size is a limitation, which hinders the generalizability of our results. Our study is cross-sectional in nature while a longitudinal approach would have been more appropriate to allow a comparison of the frequency of post-stroke depression at different stages of development.

5. Recommendations

It would also be relevant to carry out a similar study, but on a larger sample. Additionally, it is recommended to conduct qualitative studies on the subjective experience of post-stroke depression. Research on the predictive factors of post-stroke depression and longitudinal studies on the prevalence and course of post-stroke depression would be particularly useful.

Conclusion

This study noted that post-stroke depression is a relatively common complication. This study highlights the systematic screening of depression during stroke. Further studies are necessary to have criteria allowing early identification of patients at risk in order to offer them appropriate assistance.

6. Conflicts of Interest

The authors declare no conflict of interest in the context of this study.

References

[1] Berg A, Palomäki H, Lehtihalmes M, et al (2003) Poststroke depression: an 18-month follow-up. Stroke 34(1):138–43.

[2] Dieguez S, Staub F, Bruggimann L, Bogousslavsky J (2004) Is poststroke depression a vascular depression? J Neurol Sci 226(1-2):53–8.

[3] Dahlöf B, Devereux RB, Kjeldsen SE, et al (2002) Cardiovascular morbidity and mortality in the Losartan Intervention For Endpoint reduction in hypertension study (LIFE): a randomised trial against atenolol. Lancet 359(9311):995–1003.

[4] Pariel-Madjlessi S, Pouillon M, Robcis I, et al (2005) La dépression : une complication méconnue de l'accident vasculaire cérébral chez les sujets âgés. Psychol Neuropsychiatr Vieil 3(1):7–16.

[5] Goossens D, Wiart L. Dépression et accidents vasculaires cérébraux. EMC Neurol 2005 ; 2 : 157-62.

[6] Pariel-Madjlessi S, Pouillon M, Robcis I, Sebban C, Frémont P, Belmin J. La dépression : une complication méconnue de l'accident vasculaire cérébral chez les sujets âgés. Psychol NeuroPsychiatr Vieil 2005 ; 3 : 7-16.

[7] Gillen R, Tennen H, McKee TE, et al (2001) Depressive symptoms and history of depression predict rehabilitation efficiency in stroke patients. Arch Phys Med Rehabil 82(12):1645–9.

[8] Pellet J, Decrat M, Lang F, et al (1987) Description d'un échantillon de 300 échelles MADRS portant sur des sujets déprimés. Ann Méd Psychol (Paris) 145(2):170–5.

[9] Mbelesso P, Senekian VP, Yangatimbi E, Tabo A, Zaoro-Kponsere AJ, Kette GC, et al. Dépression post accident vasculaire cérébral en Afrique : mythe ou réalité ?. Bull. Soc. Pathol. Exot 2014 ; 107 : 350-355.

[10] Ojagbemi A, Akpa O, Elugbadebo F, Owolabi E, Ovbiagele B. Depression after Stroke in Sub-Saharan Africa: A Systematic Review and Meta-Analysis. Behav Neurol 2017; 2017:1-9.

[11] Hackett ML, Pickles K. Part I: frequency of depression after stroke: an updated systematic review and metaanalysis of observational studies. Int J Stroke. 2014; 9:1017-1025.

[12] Kehdr EM, Abdelrahman AA, Desoky T, Zaki AF, Gamea A. Post-stroke depression: frequency, risk factors, and impact on quality of life among 103 stroke patients— hospital-based study. Egypt J Neurol, Psychiatry Neurosurg 2020; 56:66-73.

[13] Pariel-Madjlessi S, Pouillon M, Robcis I, Sebban C, Frémont P, Belmin J. La dépression : une complication méconnue de l'accident vasculaire cérébral chez les sujets âgés. Psychol NeuroPsychiatr vieil 2005; 3(1):7-16.

[14] Ousmane C, Soumaila B, Jamila K, Khalif M, Ababacar , Serigne Saliou M et al. Dépression Post-Accident Vasculaire Cérébral au Centre Hospitalier National Universitaire de Fann, Dakar (Sénégal). Health Sci. Dis 2023; 24(5) : 19-22.

[15] Zuber M. Troubles dépressifs dans les pathologies neurologiques - 2e partie, Dépression et accidents vasculaires cérébraux : Une prise en charge balbutiante. Neurologies. 2012;15(145):56-58.

[16] Napon C, Kaboré A, Kaboré J. La dépression postaccident vasculaire cérébral au Burkina Faso. Pan Afr Med J 2012;13(3);1-4.

[17] Kouwenhoven, SE, Kirkevold, M, Engedal K,

Kim HS. Depression in acute stroke: prevalence, dominant symptoms and associated factors. A systematic literature review. Disabil Rehabil 2011; 33(7), 539–556.

[18] Kehdr EM, Abdelrahman AA, Desoky T, Zaki AF, Gamea A. Post-stroke depression: frequency, risk factors, and impact on quality of life among 103 stroke patients— hospital-based study. Egypt J Neurol, Psychiatry Neurosurg 2020; 56:66-73.

[19] Gyagenda JO, Ddumba E, Odokonyero R, Kaddumukasa M, Sajatovic M, Smyth K, Katabira E. Post-stroke depression among stroke survivors attending two hospitals in Kampala Uganda. Afr Health Sci 2015;15(4):1220-1231.

[20] Ibeneme SC, Anyachukwu CC, Nwosu A, Ibeneme GC, Bakare M, Fortwengel G. Symptoms of Post stroke Depression among Stroke Survivors: An Appraisal of Psychiatry Needs and Care during Physiotherapy Rehabilitation. Scientifica 2016; 2016(1):1-6.

[21] Somda AP, Ouédraogo PV, Kpoda BNH, Savadogo AA, Séré IS, Ouattara M, Millogo A. Dépression Post Accident Vasculaire Cérébral : Aspects Epidémiologiques et Cliniques au Centre Hospitalier Universitaire Sourô Sanou de Bobo-Dioulasso. Health Sci. Dis 2022 ; 23(5) : 143-146.

[22] BourA, Rasquin S, Aben I, Boreas A, Limburg M, Vemhey F. A one year follow-up study into the course of depression after stroke.

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