Impact of lack of rehabilitation follow-up care on the functional level and autonomy of vascular hemiplegic patients at Kinshasa University clinics on homecoming

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Abstract

Objective: To evaluate the clinical and functional profile of vascular hemiplegia patients when deciding on their return home after hospitalization and evaluate its impact on their caregivers.

Material and Methods: This prospective descriptive study involved 60 patients. It was devoted to the evaluation, on the one hand of the functional level and the autonomy of the patients at the entrance and the decision of the return home, and on the other hand of the social charge felt by the caregivers of these patients.

Results: Out of 60 patients (66.7% of men and 33.3% of women, mean age of 62.93 ± 11.3 years), 93% of patients had a score of autonomy less than 60 at home , with no significant difference between the baseline score and the return to home score ($p = 0.22$), for an average length of stay of 25 ± 12 days. On the other hand, of 60 caregivers, between 72% and 73% of caregivers had a significant homework load, and this load was significant as function and independence levels were low ($p = 0.001$). Also, a significant increase in workload was observed at home compared to the hospital ($p = 0.000$).

Conclusion: We have emphasized the importance of an acceptable level of autonomy and multidisciplinary cooperation to allow patients to return to their homes in order to ensure a good home care and reduce the heavy burden of caregivers who have also need a better quality of life.

Keywords: Lack of Rehabilitation, Follow-up care, Vascular hemiplegic, return home,

Introduction

Stroke is a common, serious and disabling condition that is recognized as a major public health problem. Its incidence is increasing more and more [1,2].

In the Democratic Republic of Congo (DRC) hospital admissions for stroke rank first among the conditions treated in Internal Medicine in Kinshasa and in the Neurovascular Unit of the Neuro-Psychopathological Center [3,4].

As the world's population tends to grow older [5], and in view of the lack of an effective policy for prevention of cardiovascular risk factors in our country, it suggests a strong growth in the prevalence of cardiovascular disease. Despite the decline in stroke-related mortality, which is explained by improved treatment management and longer life expectancy, stroke patients are likely to experience a longer period of disability before death and heavy burden for society [6,7,8].

Thus, stroke pose and pose over the next decades of management problems of a growing number of dependent patients, applicants for a significant amount of human, material and financial to the hospital and at home [9-11].

To do this, the care system must be well coordinated to ensure a good continuity of follow-up of these patients, because the stroke, apart from being an acute pathology, requiring care in extreme urgency, is also a chronic disease whose disabling sequelae lead many patients to attend the health system over a long period. Hence, the transition in the different stages of care of these patients must be well ensured in order to integrate them into the process of their empowerment.

In developed countries, about 30% of patients suffering a stroke made hospitalized in subacute care and rehabilitation (SSR) with the waning of their care in acute care [12,13,14]; and the decision to return home is made after a preliminary functional assessment, and an analysis of the home that will accommodate the patient. On the other hand, other patients are referred to a Reproductive Care and Rehabilitation Service (SRH) despite their functional level and autonomy.

In the Democratic Republic of Congo, there is a lack of transition in this pathway of care for stroke patients and a lack of multidisciplinary cooperation in their care; all patients return to their homes after hospitalization because there is no SSSR. This is what motivated us to conduct this study, with the goal of assessing the functional and autonomic level with which stroke patients return home, and its impact on the lives of their caregivers

Material and methods

Nature and period of study

This prospective descriptive study for one year was conducted during the period from January to December 2017.

Framework of the study

The Department of Cardiology and Intensive Care of the University Clinics of Kinshasa served as a framework for the realization of this.

Sample

This prospective study focused on 60 hemiplegic vascular patients hospitalized from January 2017 to December 2017. It was devoted on the one hand to functional evaluation and independence of patients at the entrance and exit of the hospital (homebound), and secondly to its impact on the social burden felt by the caregivers of these patients.

Included in the study:

• Patient therefore the diagnosis of stroke was confirmed by a CT scan and / or brain MRI;

• Hemodynamically stable patient;

• Patient for whom a functional assessment was made initially and at the close of the medical file;

• Patient with a permanent caregiver who agreed to participate in the study.

Data collection technique

Data was collected from patients, their caregivers and medical records. In patients, we collected data related to the functional parameters and independence of entry and exit of the hospital; among caregivers, we evaluated the burden felt by caregivers in supporting patients. Evaluations for these were done during hospitalization and one week after return home.

The following factors were studied: the age of the patients and their caregivers, the length of stay in hospital, the level of independence and functional start and return to home evaluated respectively by the Barthel scale and the motor index of Demeurisse, trunk stability by the Trunk control test and finally the workload of the caregivers by the Zarit scale.

Statistical analysis

We used Pearson's chi-square test to study the relationship between different study variables, with a statistical significance threshold of $p \leq 0.05$.

Ethical consideration

All hemiplegic subjects had consented in writing to participate in the study according to the Helsinki Declarations. The information collected from hemiplegic subjects was kept confidential.

Results

This study involved 60 patients, each with a natural caregiver: 40 patients (66.7%) and 20 women (33.3%) for patients, and 52 women (86.7%) versus 8 men (13). , 3%) for caregivers. The mean age of patients was 62.93 ± 11.3 years and that of caregivers 48.8 ± 11.6 years.

The mean hospital stay of these patients was 25 ± 12 days with extremes of 6 days and 60 days.

In terms of the level of autonomy of these patients at the end of hospitalization, our series shows that out of 60 patients evaluated, 56 (93.3%) returned home with an overall score of autonomy <60 (ie 63.3% with a score of 30 and 30% with a score of 30/60); and there was no significant difference between the initial level of autonomy and the decision to return home (p = 0.22) (Table 1).

As for the assessment of trunk stability, more than half of these patients (56.7%) returned home with either low trunk stability (40%) or zero stability (16.7%). However, there was not always a statistically significant difference (p = 0.24) between baseline and return home status (Table 2).

The evaluation of motor level (upper and lower) by the motor index of Demeurisse according to the period of hospitalization did not show a statistically significant improvement until the return home (p = 0.25). In addition, the majority of patients (66.6%) were discharged from the hospital either with low motor activity (43.3%) or with nil motor activity (23.3%) (Table 3).

Table 1: Evaluation and level of autonomy in returning home

Level of autonomy of barthel scale	Period of hospitalization			
	At the beginning of hospitalization		Upon return home	
	N	%	N	%
Total dependence (0 to 25/100)	46	76,7	38	63,3
Partial dependence (30 to 55/100)	14	23,3	18	30
Partial autonomy (60 to 85/100)	0	0,0	4	6,7

p=0.22

Table 2: Evaluation of trunk stability by Trunk control test

Trunk control test	Hospitalization period			
	At beginning of hospitalization		Return to home	
	N	%	N	%
No stability of the trunk (0 to 18/100)	18	30,0	10	16,7
Low stability of the trunk (19 to 38/100)	22	36,7	24	40,0
Stability of the trunk possible with (44 to 76/100)	20	33,3	20	33,3
Good stability (77 to 100/100)	0	0,0	6	10,0

p=0.24

Table 3: Evaluation of the level of motricity to limbs by the motor index of Demeurisse

Deumerisse motor index	At the beginning of hospitalization			
	At the beginning of Hospitalization		Return to home	
	N	%	N	%
No motor activity (0 to 9/100)	28	46,7	14	23,3
Low motor activity (10 to 39/100)	20	33,3	26	43,3
Average motor activity (40 to 59/100)	8	13,3	16	26,7
Acceptable motor activity (60 to 79/100)	4	6,7	4	6,7

p=0.25

Table 4: The burden of permanent caregivers of patients in hospital and home assessed by the Zarit scale

Scale of zarit	Period of hospitalization			
	At the hospital		At home	
	N	%	N	%
Light workload	20	33,3	4	6,7
Moderate workload	26	43,3	10	16,7
Large workload	14	23,3	46	76,6

p=0.000

Table 5: Influence of patients' level of autonomy on the workload felt by their caregivers

Zarit at home	Deumerise motor index									
	No Motor Activity motricity		Low Motor Activity		Moderate Motor Activity		Aceptable Motor Activity		Total	
	N	%	N	%	N	%	N	%	N	%
Light workload	0	0,0	0	0,0	0	0,0	6	10,0	6	10,0
Moderate workload	0	0,0	6	10,0	2	3,3	2	3,3	10	16,7
Large workload	4	6,7	26	43,3	14	23,3	0	0,0	44	73,3
Total	**4**	**6,7**	**32**	**53,3**	**16**	**26,7**	**8**	**13,3**	**60**	**100,0**

p=0.001

We assessed the burden felt by permanent caregivers in serving patients; thus, compared with the period of hospitalization, caregivers had a higher workload at home than at the hospital (76.7% vs. 23.3%). The differences were statistically significant (p = 0.000) between the hospital score and the home score (see Table 4). In addition, this workload of home caregivers was very significantly dependent on the level of motor activity (p = 0.001). Among 73.3% of caregivers who had a significant workload, 50% had either zero (6.7%) or low (43.3%) motor activity (see Table 5).

Discussion

The average age of patients was lower than reported in Europe [5,16] with male predominance seen in patients and female in caregivers. This lower average age in our patients can be explained by the fact that the European population is older than ours. In addition, caregivers were younger than patients and most often female. Also, the male sex is recognized as a risk factor for cerebrovascular accidents [17,18,19]. This was also found in our study where we observe a higher proportion of men.

The duration of hospitalization of these patients proved to be long; this may be related to the extent of the injury on the one hand, but on the other hand to the late payment of hospitalization bills by patients (families) who are extending their stay of hospitalization.

In assessing the state in which our patients were discharged from the hospital for a return home, it appears from this series that, relative to the level of autonomy, 93.3% of these were dependent in carrying out activities. of everyday life, with a score of Barthel <60. In addition, there was no significant difference between the level of autonomy of departure and that of return home (p = 0.22).

These results are totally contrary to what is reported in the literature [20,21,22]. Where it is said that the previous state, (measured by the Barthel's or Rankin's index), including age, as well as the severity of the stroke, are predictors of homecoming, and of becoming functional. This difference can be justified by the lack of transition of patients to follow-up care and rehabilitation before their return home in our environment.

As for the level of stability of the trunk, it was found that more than half of the patients returned home with either low stability of the trunk or with zero stability. Comparing the level of this trunk stability between the evaluation of the beginning of hospitalization and the return to home we did not observe a significant difference (p = 0.24). While poor trunk stability can impose a bedridden condition on the patient, which is logically associated with an obstacle to return home [23,24].

The evaluation of the level of motricity made by the motor index of Demeurisse showed no significant improvement (p = 0.25) before the decision of the return home. In addition, the majority of patients left the hospital either with low motor activity (overall score ≤39 / 100) or with zero motor activity (an overall score of 0/100).

These results therefore show that most of these patients who left the hospital were not eligible for a return home, and this, given their level of autonomy, trunk stability and motor skills. Moreover, the decision of their return home was not dependent on the evolution of the level of autonomy, nor of the level of stability of the trunk, nor of the level of evolution of motor activity. These results are therefore contrary to what is reported in the literature, where the patient suffering from a stroke and hospitalized in a short-term service is eligible for a return home only with a score of autonomy ≥60, and this, following a preliminary functional evaluation [22,25].

In the assessment of the workload (burden) felt by the caregivers of these patients, there was a significant increase in this at home compared to the hospital (p = 0.000). This big difference between the hospital and the home can be explained by the fact that in the hospital, the nursing staff compensates for some of the help given to the patients, whereas at home the patient is not presence only of his family. On the other hand, the home monitoring service does not exist in our community.

In addition, more than half of caregivers had a significant workload in helping their patients; whereas in a series described by A. Gallien it was found that the help of a family member was only necessary in 25 cases / 67, ie 37.3% (15). This difference is justified by the fact that in developed countries post-hospitalization patients do not all return directly to their homes, but often make a transition to a rehabilitation service, where they improve their level of autonomy and thereby reduce their workload among their caregivers.

Thus, this workload experienced by informal caregivers was very much related to the various aspects evaluated, notably the motor index, trunk stability and the level of autonomy, because the more these factors were deleterious, the greater the workload was important. (p = 0.001). This is in line with the NZAKIMUENA [27] series, which found a correlation between burden score (caregiver workload) and the importance of sequelae after stroke. Indeed, according to this series, the greater the functional deficit evaluated by the Barthel index, the higher the burden score "Zarit" was high, thus the heavy burden [26,28].

Conclusion

We have noted in this series that the vast majority of patients have left the hospital with a very low autonomy score, a motor function is zero or weak and poor stability of the trunk does not allow them to have a good maintenance and a good quality of life at home.

In addition, the decision to return home was not dependent on the functional status or level of autonomy of these patients. This situation has had repercussions on the permanent caregivers of these patients who have shown a very heavy workload, and thus a disruption of their quality of life.

Where did we find the need to create follow-up care and rehabilitation services (SSSR) in our community because they are non-existent.

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Ethical issues: All Authors declare originality and ethical approval of research. Responsibilities of research, responsibilities against local ethics commission are under the Authors responsibilities. The study was conducted under defined rules by the Local Ethics Commission guidelines and audits.

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