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Changes of the Psychological States of the Relatives of Hemiplegic Patients were Followed in Home Based Rehabilitation

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ABSTRACT

BACKGROUND*: Our first goal is the follow psycologic state of relatives of hemiplegic patients who were followed at home by functional state changes of hemiplegic patients.*

METHODS: *Hundred one hemiplegic patient's relative involved to study who managed by Istanbul Metropolitan Municipality home care services. In these cases, Beck's depression inventory (BDI) was filled with relative of patients enrolled in the rehabilitation program by face to face interviews at 0 and 3rd month.*

RESULTS: *The mean age of patients with hemiplegia were 64.43±11.11. The mean age of the patient's relatives was 42±13.14. BDI score of the 0. month decreased from 18±10.53 to 16.50±11.17 in the 3rd month. Statistically, significantly difference was determined in change of 0 to 3rd month (p<0,05).*

CONCLUSION: *This positive progress in patient's relatives may be associated with accepting patient to the treatment program and adapting to process. We are continuing our study by increasing the number of patients to better information.*

KEYWORDS: *Hemiplegia, beck's depression inventory, rehabilitation.*

INTRODUCTION

Stroke is the third most frequent cause of death and the most common cause of acquired adult disability in developed countries. It is one of the leading causes of death and long-term disability. Advances in medical technologies have increased stroke survivorship, resulting in an increasing number of disabled persons who experience strokes (1,2). Stroke has a great impact not only on the lives of the stroke survivors but also their relatives. The relatives of stroke patients provide informal care ranging from physical help to psychosocial support. As a result, these carers may experience high levels

of burden, associated with characteristics of the patients and of the relatives themselves (3-5).

Stroke patients who survive the acute illness and are discharged from the hospital frequently depend on informal caregivers for practical and emotional support.

In spite the extensive awareness shown in depression occurring in stroke patients, little attention has been focused on the emotional outcome and depression of relatives of stroke survivors. The majority of survivors continue to live at home and often need practical help and emotional support.

Relatives depression may be associated with several patient-related variables. Spouses or other relatives of patients with more severe stroke or greater physical dependency were more often depressive in many studies.

Previous studies have documented the physical burden placed on stroke caregivers and the impact that this may have on their physical and psychological well-being (6). After it had been established that problems among caregivers are common, some studies described and evaluated interventions designed to prevent or alleviate these problems (7).

All of these issues make it difficult to know the extent and specific nature of the emotional and physical problems associated with caregiving and, from a public health perspective, to determine where practical interventions can be applied cost-effectively (8).

In this context, we followed up hemiplegia patients of Istanbul Metropolitan Municipality, they follow under the name of Home Care Service. Our purpose in this study, determine the depression state of care workers of hemiplegic patients who were followed at home during at rehabilitation process.

MATERIALS AND METHODS

This randomized, prospective, controlled, single blind study was conducted in Physical Medicine and Rehabilitation stroke outpatient clinic and Istanbul Metropolitan Municipality's Home Care Service. A hundred hemiplegic patient's relative involved to study who managed by Istanbul Metropolitan Municipality home care services. This form of patient demographics, FAS (Functional Ambulation Scale), concomitant diseases, tobacco and alcohol used, disease duration, and stroke etiology was completed on. In addition to their demographic characteristics (age, gender, weight, height, body mass index [BMI]), the patients were also questioned for occupation, main symptoms, time of diagnosis. The patients were between the ages of 20 and 75 included in this study. We compared the values of FAS followed three months (9).

In these cases, BDI (10) was filled with relative of patients enrolled in the rehabilitation program by face to face interviews at 0 and 3rd month.

The team of following the home group consisted of 1 specialist doctor of Physical Medicine and Rehabilitation, 1 medicine doctor, and 12 physical therapists. The team of following hospital group consisted of 1 specialist doctor of Physical Medicine and Rehabilitation, 1 medicine doctor, and 6 physiotherapists. Patients with a physiotherapist 2 days a week for 3 months was taken to the rehabilitation program. Neurological rehabilitation to patients as balance-coordination training, hand rehabilitation, stretching and relaxation exercises, walking exercises, posture exercises have been implemented. All the recruited subjects signed informed consent forms before participating in the study and the approval of the local Ethics Committee was obtained. All the subjects gave their consent to the random assignment to the groups.

The calculations were performed using the Statistical Package for Social Sciences for Windows software version 16.0 (SPSS Inc., Chicago, IL, USA). The Kolmogorov-Smirnov test was used to confirm that data within the ranges of normal distribution in both groups. A non-parametric test was employed for the variables outside the normal distribution. The comparison of the data between the groups was carried out through the independent-samples t test. Statistical significance was based on a value of $p < 0.05$ with a 95% confidence interval.

RESULTS

Our study includes 101 hemiplegic patients and 101 care workers (Figure 1).

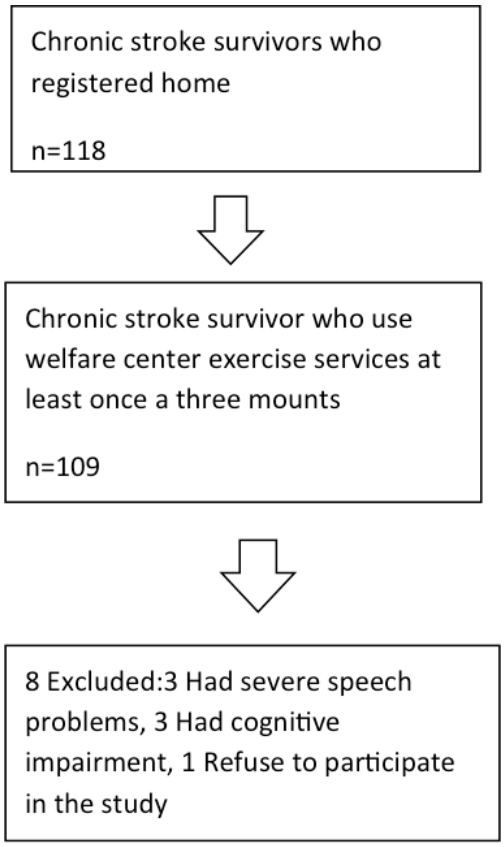

Figure 1. Study flowchart.

The mean age of patients with hemiplegia were 64.43±11.11. The mean age of the patient's relatives was 42±13.14. According to groups, demographic information is presented in table 1.

Table 1. *The demographic data of the Group.*

Characteristics	Home (n=101)	Relatives (n=101)
Sex	62 male (61%)	36 male (35%)
Age (year)	64.43 ± 11.11	42±13.14
Disease Duration (year)	1.56 ± 0.85	-
BMI (kg/m^2)	30.42 ± 4.52	29.52 ± 3.88
Tobacco	42 (41%)	52 (51%)
Alcohol	28 (27%)	20 (19%)
schemic stroke	91 (90%)	-
Hemorrhagic stroke	10 (10%)	-
Right side	51 (60%)	-
Left side	34(40%)	-

Depression states of relatives of patients presented at table 2 according to scores.

Table 2. *Changes of depression states at relatives of patients during the rehabilitation period*

2. Characteristics	Depression stage of stroke relatives	
Time	0. ay	3. ay
Minimal Depression	60 (61%)	69 (69%)
Mild Depression	11 (10%)	9 (8%)
Moderate Depression	13 (12%)	10 (9%)
Severe Depression	18 (17%)	11 (10%)

Relatives of gender and stroke patients' BDI comparisons emphasized at table 3 according to duration of disease.

Table 3. *BDI scores of comparisons at relatives of gender and stroke patients according to duration of disease*

Relatives	BDI<10	BDI>10	p
Male	17 (47%)	19 (53%)	
Female	23 (35%)	42 (65%)	<0.05
Disease duration (6 and <6 month)	15 (25%)	60 (75%)	<0.05
Disease duration (>6 month)	13 (50%)	13 (50%)	

BDI scores of relatives of stroke patients' presented at table 4 according to acute and chronic stroke states. FAS and BDI values are presented according to groups in tables 5 and 6.

Table 4. *BDI scores of relatives of patients according to state of acute and chronic stroke*

	Disease duration (6 and <6 month)	Disease duration (>6 month)	p
Starting BDI values	22.03± 10.38	16.16± 9.86	<0.05

Table 5. *Difference between the change of groups baseline and 3. Month FAS values*

FAS	Baseline	3. month	p
	0.88 ± 1.166	2.22 ± 1.72	<0.05

Table 6. *Difference between the change of groups baseline and 3. Month BDI values*

BDI	Baseline	3. month	p
	18±10.53	16.50±11.17	<0.05

DISCUSSION

We evaluated the changes in depression scores of relatives of hemiplegic patients who is under rehabilitation program at home in our study. In the result of our study, BDI scores of relatives of patients changed in a good way according to improvements of FAS scores of patients by the 3 month rehabilitation period (p<0.05, Table4).

The average age of the patients in the current study was 64.43 ± 11.11 years (range, 25 – 80 years). The incidence of cerebrovascular disorders increases with age, and only 28% of hemiplegic patients are under 65 years of age (11). As of 1997, the estimated average age in Turkey was 72.37 years (12).

In the previous study, stroke patients' depression states evaluated according to acute or chronic state of disease (6,7). Nevertheless, effect of rehabilitation period to depression state on the relatives of patients had not evaluated.

The gender states of the relatives of the patients examined in our study, BDI scores is higher in women. It is consistent with earlier studies. The proportion of patients was found to be 39% who are BDI scores more than 10 of relatives of patients (Table 2). In the previous studies present that proportion as 11-42%. In this way, our study consistent with the literature (5,13).

In the previous studies shows us, relatives of patients are more depressed when hemiplegic patients are in emotionally stress mood (5). In our study, BDI scores decrease in the end of the rehabilitation period by improvement of functional health of hemiplegic patients (Table 6).

In the recently studies shows us, depression scores of relatives of hemiplegic patients related with the duration of disease. According this studies, BDI scores of relatives of short term hemiplegic patients (duration of loss of ability is

less than 6 month) is higher than long term hemiplegic patients (duration of loss of ability is more than 6 month) as statistically significant (7,14). These findings are the same in our studies (Table 3 and 4).

These suggest that emotional distress is common among those caring for patients who have suffered a stroke and that it is predominantly the caregivers of patients with poor physical states who are likely to have poor emotional outcomes themselves (15). We evaluated the psychologic status of relatives of a small group of hemiplegic patients in our study. In our findings, relatives of hemiplegic patients affected from stroke as psychologically.

Nevertheless, researches intended for relatives of patients are limited when we compare witf the researches of hemiplegic patients. In the future studies should more intended relatives of hemiplegic patients. It is truly important for public health.

Istanbul Metropolitan Municipality in his study at home under the care reveals the name of the stroke patients can be monitored without the need for a hospital. This positive concept should be made more widely.

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