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Effect Of Bobath Approach In Improving Adl Of Hemiplegic Patients

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Abs tract:-*Stroke is the third leading cause of death and the primary cause of long term disability. It is a sudden, focal neurological deficit resulting from ischemic (or) hemorrhagic lesions in the brain. It affects more than six lakhs people all over the world each year. In the analysis and interpretation of Functional independence scale and Barthel Index of Bobath approach, There was a significant in the FIM scales pre test (M= 67.3, SD=0.96) and post test (M= 74.9, SD=0.96) t(9)=25.01, P ≤0.01 which showed that there was significant improvement in ADL following Bobath approach. There was a significant in the Barthel Index scales pre test (M= 68.9, SD=1.33) and post test (M= 75.9, SD=1.33) t (9) =16.63, P ≤0.01 which showed that there was significant improvement in ADL with response to Bobath approach. Thus, the study concluded that Bobath approach was the effective treatment for improving ADL in stroke patients and also functional independence scale (FIM) and Barthel index scale could be used as the assessment tool for stroke patients.*

Keyw ords:BIS, FIM, ADL and Bobath approach.

INTRODUCTION

Stroke is the third leading cause of death and the primary cause of long term disability. It is a sudden, focal neurological deficit resulting from ischemic (or) hemorrhagic lesions in the brain. It affects more than six lakhs people all over the world each year. Men have a higher incidence of stroke than women and it has greater incidence in the population aged 60-75 (Dora YL Chan 2006). Stroke is a syndrome characterized by rapidly developing clinical symptoms and/or signs of focal or global loss of cerebral function, with no apparent cause other than that of vascular origin. Stroke is the leading cause of serious and longterm disability and is the third leading cause of death in the USA. There are about 800,000strokes each year (Lloyd-Jones D, Adams RJ 2010). The severity of neurological deficit in a stroke affected patient depends on the location and extent of lesion and the amount of collateral blood flow (Kenji Matsumoto 2005). Among the several cerebral arteries MCA is most vulnerable to get affected resulting in contra lateral hemiplegia with upper limbs more affected than lower limbs (Corriveau H, Arsenault AB 1992).Functional limitation is the inability of an individual to perform a task or activity in the way it is done by most people, as a result of an impairment (Krutulyte G, Kimtys a, et al 2003).

AIM OF THE STUDY

The aim of the study was to investigate the effect of Bobath approach in improving ADL of hemiplegic patients.

OBJECTIVE OF THE STUDY

1.To determine the effect of Bobath approach in improving ADL of hemiplegic patients while measuring Barthel index scale and functional independent measure.
2.To find out the effective treatment in improving ADL of hemiplegic patients.

Materials

1.Couch
2.Back rest chair
3.Pillow
4.Materials and equipment needed for ADL
5.Table
6.ADL trainer board
7.FIM chart and score
8.Barthel index chart & score

Methodology : Study design
Quasi experimental study with pre vs post test design
Inclusion criteria
1.Age 45-60 years
2.Both sexes
3.Ischaemic stroke only
4.Internal capsule lesion

Exclusion criteria
1.Sensory and orthopaedic deficit
2.Associated cardio pulmonary problems
3.Associated perceptual disorders
4.Nutritional factors
5.Acute stroke patients

Parameter

1.Barthel index scale
2.FIM scale

Procedure

Ten subjects who met inclusion criteria were recruited by purposive sampling method. After the informed consent was obtained they were 10 subjects population only.

After a brief demonstration about Bobath approach was subjected to perform FIM and Barthel Index for a period of 3 months 2 times daily.

Pre and post test result was recorded and computed. Statistical tool

The collected data were subjected to statistical analysis using paired and 't-test' to find out the research effectiveness.

't' test

The 't'-test was used for comparing the pre vs post test value of FIM scale and Barthel index for MRP separately

Results

Table – 1

Bobath Approach			
FIM Scale		Barthel Index	
Pre	Post	Pre	Post
57	64	56	62
81	89	76	81
74	82	61	70
68	75	74	81
59	68	59	65
61	70	71	80
70	78	68	75
60	66	71	79
69	76	74	81
74	81	79	85

Table – 2 FIM Scale

Table 2 represents the mean values, mean difference, standard derivation, and 't' value between pre test versus post test values of Functional Independence scale who have been subjected to Bobath approach.

S. No.	FIM Scale	Mean	Mean Difference	SD	t-value
1.	Pre – Test	67.3	7.6	0.96	25.01
2.	Post – Test	74.9			

The paired t-value of 25.01 was greater than the tabulated t value of 4.78, which showed that there was statistically significant difference at P ≤0.01 level between Pre vs. Post test result. There was a significant in the FIM scales pre test (M= 67.3, SD=0.96) and post test (M= 74.9, SD=0.96) t(9)=25.01, P ≤0.01 which showed that there was significant improvement in ADL following Bobath approach.

Fig 1 Mean of FIM Scale

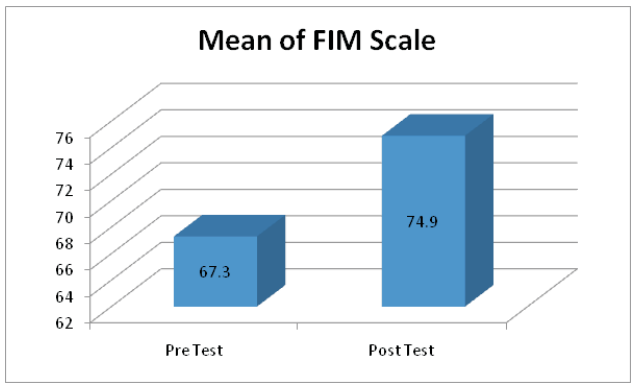


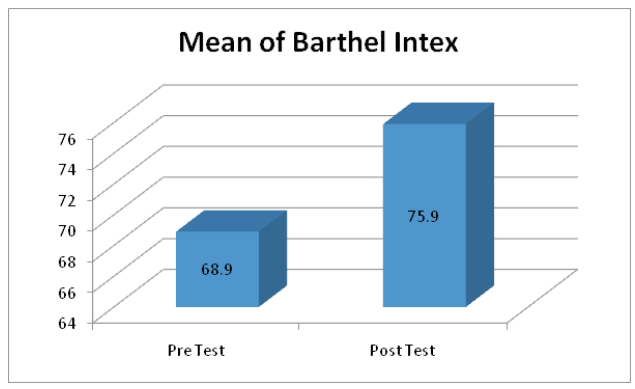
Table – 3 Barthel Index Scale

Table 3 represents the comparative mean value, mean difference, standard deviation and t- value between Pre vs. Post test value of Bobath approach

S. No.	Barthel Index Scale	Mean	Mean Difference	SD	t-value
1.	Pre – Test	68.9	7	1.33	16.63
2.	Post – Test	75.9			

The paired t-value of 16.63 was greater than the tabulated t value of 4.78, which showed that there was statistically significant difference at P ≤0.01 level between Pre vs. Post test result. There was a significant in the Barthel Index scales pre test (M= 68.9, SD=1.33) and post test (M= 75.9, SD=1.33) t(9)=16.63, P ≤0.01 which showed that there was significant improvement in ADL with response to Bobath approach.

Fig 2 Mean of Barthel Index



DISCUSSION

The aim the study was to find out the effect of Bobath approach approach in improving ADL of stroke patients

M Dam, P Tonin (2003), conducted an experimental study with 51 hemiplegic patients. The aim of the study was to determine the improvement in activities of daily living by using Barthel index scale

Chan DY, Sung YT,Lin YT., (1990) conducted an experimental study on 52 patients with thrombotic or haemorrhagic stroke. The main purpose of the study was to determine the improvement in activities of daily living by using functional independence scale.

Based on the results of MDam, Chan DY (2003), the present study has taken Functional independent scale and Barthel index scale as parameter to measure the activities of daily living.

In the analysis and interpretation of FIM scale in Bobath approach:

The paired t-value of 25.01 was greater than the tabulated t value of 4.78, which showed that there was statistically significant difference at $P \leq 0.01$ level between Pre vs. Post test result. There was a significant in the FIM scales pre test (M= 67.3, SD=0.96) and post test (M= 74.9, SD=0.96) t (9)=25.01, $P \leq 0.01$ which showed that there was significant improvement in ADL following Bobath approach.

In the analysis and interpretation of Barthel index scale in Bobath approach:

The paired t-value of 16.63 was greater than the tabulated t value of 4.78, which showed that there was statistically significant difference at $P \leq 0.01$ level between Pre vs. Post test result. There was a significant in the Barthel Index scales pre test (M= 68.9, SD=1.33) and post test (M= 75.9, SD=1.33) t (9) =16.63, $P \leq 0.01$ which showed that there was significant improvement in ADL with response to Bobath approach.

The results of studies conducted by Lang hammer, Chan DY (2001) supported the result of the present study in which Bobath approach has given improvement in above mentioned parameters in stroke patients.

The results of the studies conducted by Ray-Yau Wang, Corriveauh et.al (2005), supported the present study in which Bobath approach has given improvement in ADL of group B stroke patient.

Based on the statistical analysis and interpretation the results of the present study showed that there was significant improvement in ADL of FIM scale and Barthel index score in stroke patients treated with Bobath approach.

The result of studies conducted by Langhammer B, Stanghelle JK, et.al (2001) supported the effect of present study.

Reason for improvement of ADL in Bobath approach Utilization of plasticity and capacity of the brain for reorganization.Training of task oriented activity in context with demands of environment. Regaining the ability to perform motor task involves a "learning process. The patients need to practice, get feedback understand the goal etc. to establish learning. Motor control is exercised in both anticipatory and ongoing modes and the postural adjustments and focal limb movements are inter related. A specific motor task control can be regained by practice of that specific task and it must be practiced in their various environmental contexts.

Sensory input related to the motor task help to modulate the action. Strengthening of Parallel and Hierarchial processing in CNS. Increased integration of sensory and motor cortical areas.

When we ask the patients to perform the task by several steps, the patient tries the goal and performs it, through feedback. Functional motor area in the cortical level gets strengthened while performing the task repeatedly.

CONCLUSION

The present study concluded that Bobath approach was the effective treatment for improving ADL in stroke patients and also functional independence scale and Barthel index scale could be used as the assessment tool for stroke patients.

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