

CASE REPORT - PHYSIOTHERAPY

PHYSIOTHERAPY INTERVENTIONS IN A POST HEMORRHAGIC STROKE HEMIPLEGIC PATIENT-A CASE REPORT

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Abstract

Background : Stroke is one of the leading causes of death and disability in India. Stroke is classically characterized by a neurological deficit attributed to an acute focal injury of the central nervous system (CNS) by a vascular cause including cerebral infarction, Intra-Cranial Hemorrhage (ICH) and Sub-Arachnoid Hemorrhage (SAH), which may also present as Transient Ischemic Attack (TIA). Hemiplegia refers to paralysis of one side of the body, usually as a result of injury to the brain, as in this case; Cerebrovascular Accident (CVA). The Physiotherapy interventions that include specific Evidence based treatment techniques, are aimed at improving the quality of living and restoring back the functional capacity of the patients. This may vary from the treatment commencing early in the Intensive care unit to the functional improvements that allows patient's ability to participate in one's role in the society.

Materials & Methods : A 62 years old gentleman with resultant right sided hemiplegic post hemorrhagic stroke was treated with physiotherapy interventions comprising therapeutic exercises and specific treatment techniques such as Proprioceptive Neuromuscular Facilitation(PNF), Functional Rehabilitation Sequence, Motor Re-learning Program and training sessions for Activities of Daily Living (ADL), Bladder and Bowel Control, Balance, Co-ordination and Gait. The evaluations of Pre and Post rehabilitation were made at certain intervals, using "Barthel Index Score" a therapeutic scale used to assess Activities of Daily Living (ADL)

Results : Patient was treated with regular sessions of exercise protocols that were designed and re-designed appropriately in accordance to the prognosis of the individual. Short-term and Long-term goals were set; and focused on the target achievement.

Conclusion : The Physiotherapy interventions aimed at Rehabilitation and Restoration of a healthy lifestyle had a good result as anticipated.

Keywords : Physiotherapy, Acute stroke, Hemorrhagic stroke, Cerebrovascular Accident, Hemiplegia.

INTRODUCTION

A Male, 62 years old, residing in Erode, had complaints of Slurring of speech, weakness of right upper limb and lower limb in October 2021 and got treated initially in a private hospital.

His condition was diagnosed as Acute Intra-Cranial Hemorrhage in Thalamo-capsular Region (Left side) and a Mild Mass-effect over Third Ventricle. He was also diagnosed earlier with Systemic Hypertension that was not under treatment.

After discharge from the hospital, he was enrolled in Physiotherapy interventions through Makkalai Thedi Maruthuvam (MTM) scheme under Modakurichi Block Team (Erode District).

CASE ILLUSTRATION**Initial Assessment:**

- Patient was conscious and well oriented.
- Had mild slurring of speech.
- Had flaccid tone of Muscles in the Right Upper Limb and Lower Limb.
- Sensation : - Superficial senses were intact,
 - Deep sensations such as Kinesthetic,
 - Proprioceptive & Vibration were affected,

- Cortical sensations were affected.

- Had stooping posture when made to stand with support.
- Co-ordination was affected.
- Balance and Gait couldn't be assessed as ambulation was affected.
- Activities of Daily Living (ADL) were assessed through the Scale "Barthel Index".

Goals of Treatment:

Physiotherapy Interventions were planned based on the assessment, with following goals,

- Functional Re-education
- Training of Activities of Daily Living
- Bladder and Bowel control
- Balance Training
- Co-ordination Training
- Gait Training



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Tool for Evaluation : Barthel Index Score

Table 1 showing the Barthel Index Scores in the Initial Phase of treatment and in the Later Phase following a particular interval in the course of treatment.

S. No	Activity	Score		Reference
		Initial	Post Therapy	
1	Feeding	0	6	0 = unable 5 = needs help cutting, spreading butter, etc., or requires modified diet 10 = independent.
2	Bathing	0	4	0 = dependent 5 = independent (or in shower)
3	Grooming	0	3	0 = needs to help with personal care 5 = independent face/hair/teeth/shaving (implements provided)
4	Dressing	0	5	0 = dependent 5 = needs help but can do about half undressed 10 = independent (including buttons, zips, laces, etc.)
5	Bowels	2	9	0 = incontinent (or needs to be given enemas) 5 = occasional accident 10 = continent
6	Bladder	0	9	0 = incontinent, or catheterized and unable to manage alone 5 = occasional accident 10 = continent
7	Toilet Use	0	6	0 = dependent 5 = needs some help, but can do something alone 10 = independent (on and off, dressing, wiping)
8	Transfers (Bed to chair and back)	0	13	0 = unable, no sitting balance 5 = major help (one or two people, physical), can sit 10 = minor help (verbal or physical) 15 = independent
9	Mobility (On Level Surfaces)	3	15	0 = immobile or < 50 yards 5 = wheelchair independent, including corners, > 50 yards 10 = walks with help of one person (verbal or physical) > 50 yards 15 = independent (but may use any aid; for example, stick) > 50 yards
10	Stairs	0	5	0 = unable 5 = needs help (verbal, physical, carrying aid) 10 = independent.
Total (0 - 100)		5	75	Improved

Therapeutic Techniques :

The following techniques were used to treat this patient to achieve the above set goals,

- Passive movements progressing to Active assisted movements and then to Active movements
- Facilitation techniques to improve Muscle tone including Proprioceptive Neuromuscular Facilitation (PNF) techniques,
- Functional Rehabilitation Sequence with Motor Re-learning programme
- Exercises to improve swallowing and speech, Facial exercises
- Sitting, Standing and balance training
- Core exercises, Bladder and bowel control exercises
- Gait training and rehabilitation
- Task specific movements training
- Training ADL

- Breathing exercises
- Co-ordination exercises (Frenkel's Exercises)

CONCLUSION

This patient was treated with the therapeutic techniques mentioned in the description and the attenders were taught regular exercises. The prognosis was monitored and the progressive exercise modifications were done, based on the achievement of goals and capabilities.

Barthel Index Scale was used as a tool for evaluation of prognosis. The patient showed a good improvement in his lifestyle. Further exercises that are to be continued and the modifiable risk factors were explained to the patient and his family.

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