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Original Research Paper

Occupational Therapy

THE EFFECT OF TASK ORIENTED FUNCTIONAL TRAINING PROGRAMME IN ELDERLY WITH HEMORRHAGIC STROKE- A CASE STUDY

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ABSTRACT

BACKGROUND- A 70 year old unknown male patient was found unconscious on road and was brought to tertiary care hospital. On investigations and clinical correlation, patient was diagnosed as a case of left hemiparesis secondary to acute middle cerebral artery infarct. Patient regained consciousness on next day and was in state of complete dependence for bed mobility and daily living activities. He was managed conservatively and was referred to occupational therapy department for further management.

METHOD- Patient was evaluated by using uniform terminology. Modified Barthel index, Modified Rankin Scale, Basic MOCA scale and Stroke Specific QOL scales were administered. Patient was given intervention for 5 weeks.

Enabling activities with self-care functional activities were practised. Accident prevention, activity promotion, Compensatory strategies and environmental modifications were done. Scales were administered post intervention and comparative data was obtained.

RESULT- Change of pre-intervention and post- intervention **score** indicates improvements in performing activities of daily living, reduced disability, improved cognition and quality of living. There were significant improvement in activities like eating, drinking milk, in bed mobility dressing and coming to sit. Minimum to moderate improvement was seen in activities like toileting, walking, stair climbing and use of wheelchair. Despite his age and lack of family support, significant functional improvements were documented in this elderly stroke patient, and he was discharged to old age home.

CONCLUSION- Supplementing enabling activities with task oriented functional training is feasible and effective in improving independence for activity of daily living in elderly stroke

KEYWORDS : elderly, functional training, hemorrhage, stroke, independence

INTRODUCTION-

Stroke, as per statistics, is the second leading cause of impairment and the third leading cause of death among the elderly, in India. Stroke is also the cause of disability and premature death in the rural, semi-urban and urban regions of India. The primary non-modifiable risk factor for an attack of stroke is age.

The risk factor of a stroke attack for elders in the age group of 74-84 have been determined to be 60% and for those 85 years of age and beyond, the risk factor has been determined to be around 80%.

Task-oriented (TO) is a highly individualized, client-centred, occupational therapy, functional-based intervention, compatible with motor learning and motor control principles such as intensive motor training, variable practice and intermittent feedback. The intensive practice of functional activities (self-care, work and leisure) aims to enable the client with opportunities to discover the most optimal strategies (i.e. the most efficient and effective) to enable optimal functional performance.

BACKGROUND

The OT task-oriented approach is based on a systems model of motor control and theories of motor learning. This approach attempts to understand the problems faced by the nervous system to control movements.

Treatment Principles of OT Task-Oriented Approach

1) **Client Centered-**

adopt a client centered focus in treatment.

Elicit active participation of the client during treatment.

2) Occupation Based-

Use functional tasks as the focus in treatment

Select tasks that are meaningful and important to the client's roles.

Describe the movements used for task performance.

Analyse the movement patterns and functional outcomes of task performance.

3) Person and Environment-

Identify the personal and environmental factors that serve as major influences on occupational performance.

Adapt the task or broaden the environment to promote optimal occupational performance.

4) Practice and Feedback-

Structure practice of the task to promote motor learning.

Design the practice session to fit the type of task and learning strategies.

Provide feedback that facilitates motor learning and encourages experimentation with solutions to occupational performance problems.

5) General treatment goals-

Discover the optimal movement patterns for task performance.

Achieve flexibility, efficiency, and effectiveness in task performance.

Develop problem-solving skills with clients so they can identify their own solutions to occupational performance problems in home and community environments

In stroke care, family plays a vital role in improving quality of life.

Family support and social support has a significant positive impact on the physical and psychosocial well-being of patients with stroke and easy to progressive improvement of functional status.

High levels of social support were associated with faster and more extensive recovery of functional status after stroke. Social support may be an important prognostic factor in recovery from stroke. Socially isolated patients may be at particular risk for poor outcome.

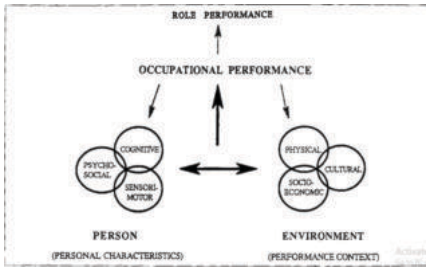
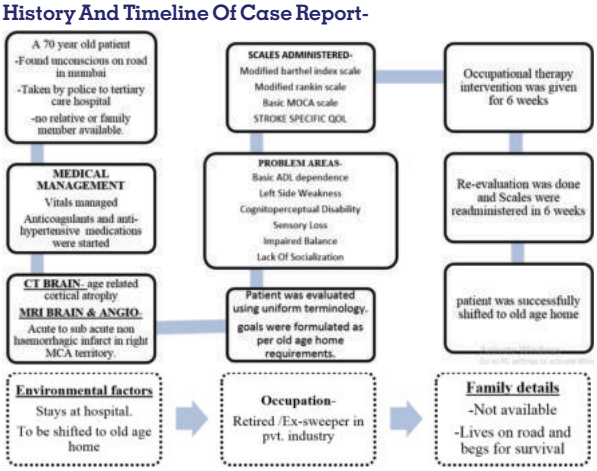


Figure 1. ***The task-oriented approach uses the systems model of motor control to illustrate that occupational performance emerges from the interaction of multiple systems, including those related to the person and those related to the environment.***

CASE PRESENTATION:

History And Timeline Of Case Report-



As per illustration above, goals were formulated, patient received occupational therapy intervention for 5 weeks and was shifted to old age home successfully.

CLINICAL FINDINGS-

Dependent in basic activities of daily living, weakness of left side, abnormal tone, cognitive loss, perceptual loss, sensory loss, impaired balance, lack of socialization.

ASSESSMENT-

- MOCA basic aims to test cognition in subjects who are illiterate or with low education (less than 5 years).

It covers most cognitive domains that may be impaired in subjects with Mild Cognitive Impairment irrespective of etiology. It is used to assess domains like executive functions, language, orientation, calculations, conceptual thinking, memory, visuo-perception, attention and concentration.

Time to administer the MOCA-B is approximately 15 minutes. It is scored on 30 points.

- Modified barthel index is an ordinal scale used to measure performance in activities of daily living. It sensitive to small changes in functional independence than the Barthel Index.

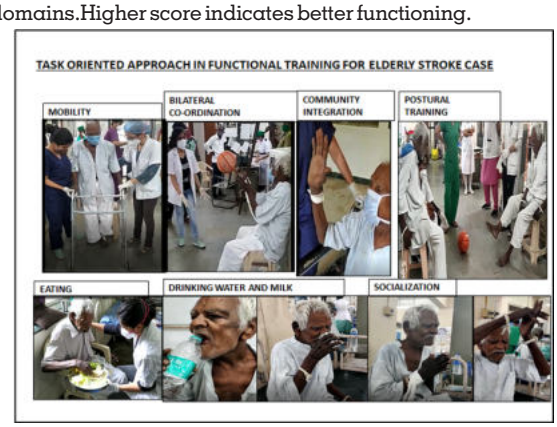
It takes 5-7 minutes to administer this scale.

Ten variables describing ADL and mobility are scored, a higher number being a reflection of greater ability to function independently.

- - The Modified rankin scale (mRS), a clinician-reported measure of global disability, is widely applied for evaluating stroke patient outcomes. It measures the degree of disability or dependence in the daily activities of people who have suffered a stroke or other causes of neurological disability.

- The stroke specific quality of life scale (SS-QOL) is a patient-centered outcome measure intended to provide an assessment of health-related quality of life specific to patients with stroke.

It is a self-report scale containing 49 items in 12 domains.Higher score indicates better functioning.



The intervention was divided in 3 stages;

WEEKS	GOAL	INTEREVENTION
First 2 weeks	-Awareness of self and others. -Improve arousal. -positioning and In bed mobility -Drinking a glass of milk and eating dal rice by himself in supported sitting	Empathetic and soft as patient gets irritable. Approached from left side to prevent neglect. Patient was positioned near the sisters table for continuous monitoring with unilateral wall support to prevent fall or hazard. Left upper limb and lower limb were positioned in neutral position by help of pillows and water bottles. A back support with front desk was provided.
2-4 weeks	-wear his shirt in supported sitting position -will tie lungi with his right hand in sitting position -Patient will greet doctors saying 'namaskar' in every meet	Activities like ball throwing and ball kicking were given for improving sitting tolerance. Weight shifts were taught. Fine motor strengthening exercises like pressing gloves filled with water, cloth clip pressing, facial muscle strengthening was done. Small efforts like saying "namaskar", using one line simple sentences
4-5 Weeks	-walk with the help of walker under minimum assistance for 100 meters in 1 month. -participate in leisure activity for at least 20 minutes a day in 1 month. -go to old age home and participate in sitting group activity for at least 15 minutes twice a day in one month.	Weight bearing, Spot marching, Step up down, Frenkel's exercises, unilateral reach outs, Repetitive verbal feedbacks Introduced to another unknown patient, eat Lunch together. Singing, talking about life experiences. Activities in pair like ball throwing, ball kicking, talking on a single topic about favourite place etc.

RESULTS-

All short term goals were achieved and significant changes were seen in pre and post scores of modified Barthel index, moca basic and stroke specific quality of life scales.

Scales	PRE EVALUATION 15/02/2021	POST EVALUATION 24/02/2021
Modified Barthel Index Scale	0 (total dependence)	24 (severe dependence)
Modified Rankin Scale	5 (severe disability)	4 (moderate severe disability)
Basic MOCA Scale	10/30- severe cognitive impairment	18/30- moderate cognitive impairment
Stroke Specific QOL	49	70 (improved function)

DISCUSSION-

Overall, the patient had a difficult start following his stroke. Lack of family and financial support was challenging for the recovery of patient but hospital facilities and supportive staff helped in improving his general condition.

Intensive rehabilitation has been proven to create significant gains in function following a stroke but it was limited due to aging and underlying degenerative changes.

Earlier Patient was completely dependent until he could express his needs. Improvement in tone and control of affected side could help patient to participate in bilateral activities.

Use of real life goal oriented tasks could improve motivation of patient and thereby helped in functional improvements.

Involving patient is pair and group activity was productive in terms of communication and reducing isolation.

Patient was sent to old age home for feeling of belonging and connectedness.

CONCLUSION-

Task oriented functional training programme improves activities of daily living performance and leads to more independence in elderly stroke. It would help patient to regain control on his life and give sense of satisfaction.

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