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Introduction: Constraint-induced Movement Therapy (CIMT) is an evidence-based and promising rehabilitation strategy for overcoming the 'learned non-use' phenomenon [1-3]. In last decade, CIMT became popular in local rehabilitation field mostly for acute and subacute stages of cardiovascular disease (CVA) in hospital settings [4-5]. For community-based out-patient rehabilitation settings, there are limitations for CIMT applications, such as patient compliance in restraining the less affected limb, sustainability of intensive supervised training, etc. Modification and structured protocol must be established for the community settings to ensure the effect of CIMT.

Methodology: Case study was conducted to illustrate the limitations of CIMT application in a community-based rehabilitation centre and measures were suggested to overcome these limitations. A subject suffered from chronic stroke for 15 months, with Mini Mental State Examination (MMSE) score = 23, Modified Functional Ambulatory category (MFAC) = 7 and meet the motor criterion (45˚ of wrist extension, full thumb abduction and resting four fingers extend in almost full range) participated in the study. Motor Activity Log (MAL), Functional Test for Hemiparetic Upper Extremity (a 7-level test), Functional Independence measure (FIM), grasp and grip strengths were used as outcome measures. The subject received a structured modified CIMT protocol by incorporating the principles of Conductive Education (CE) with 2-hour's individual task series session followed by 6-hour constraint time daily with pre-determined activities in real-life situations for 15 days.

Results: With the structured protocol, improvement was obtained in 2 MAL sub-scores, namely: 'Amount of Use' subscore (pre-test score: 2.05; post-test score: 3.57) and 'How Well' subscore (pre-test score: 2.15; post-test score: 3.67) indicating that the phenomenon of learned non-use was improved. The grasp and pincer grip powers were improved (pre-test power:6 kg; post-test power: 26 kg). The subject showed good compliance during the restraint period (mean restraint period = 5.35 hours daily) and satisfaction in the outcome with positive feedback were obtained.

Conclusion: The proposed protocol employed both CIMT and CE with a common cause of maximizing the use of more-affected upper limb in both personal and instrumental self-care activities for patients with chronic stroke, it serves well as one of the promising intervention strategies to be implemented in community-based out-patient rehabilitation settings.

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SAHK
香港耀能協會

17/F, 21 Pak Fuk Road
North Point, HK
香港北角百福道
21 號 17 樓

PHONE 電話 (852) 2527 8978
FAX 傳真 (852) 2866 3727
EMAIL 電郵 ho@sahk1963.org.hk
WEB SITE 網此 www.sahk1963.org.hk