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Longitudinal Assessment of Post-Stroke Recovery in Mca Patients Undergoing Physiotherapy: An Observational Study

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Abstract

Background: Strokes, whether ischemic or haemorrhagic, present complex motor deficits influenced by genetics, pre-existing conditions, and rehabilitation. In both developed and low-middle-income countries like India, strokes pose significant health challenges, with the majority of cases in LMICs. The Fugl-Meyer scale assesses stroke recovery, focusing on sensorimotor function. This study aims to optimize intervention timing for physiotherapists by understanding stroke recovery dynamics.

Methods: This observational study recruited 50 patients with ischemic MCA stroke within 30 days of onset. Over 3 months, patients were assessed using the MOTOR ASSESSMENT scale, FUGL-MEYER ASSESSMENT scale, and FUNCTIONAL INDEPENDENCE MEASURE. Inclusion criteria were ages 40-60, Fugl-Meyer score <66 for upper extremity, <6 in sitting balance, and FIM score <3 For severe communication or memory deficit. Exclusion criteria were other neurological diseases, subarachnoid haemorrhage, transient ischemic attack, brainstem lesion, and orthopaedic impairments.

Results: The research groups showed significant progress.

Arm mean: 12.56 (pre-test) to 31.44 (last post-test), f value 720.97, $p < 0.05$. Leg mean: 10.42 to 29.74, f value 2358.32, $p < 0.05$. Sensation: 7.46 to 20.18, f value 2022.75, $p < 0.05$. MAS: 6.86 to 25.42, f value 2224.19, $p < 0.05$.

FIM: pre-test mean 22.56, third-month post-test mean 38.62, both $p < 0.05$, f value 1870.32.

Conclusion: Overall, significant improvements were observed in various scales within the study groups, including Fugl Meyer Scale scores for arm, leg, and sensation, as well as MAS and FIM scores ($p < 0.05$).