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Effective Rehabilitative Interventions with Patient-Tailored Approach on Spinal Muscular Atrophy: A Case Report

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ABSTRACT

Background: Spinal muscular atrophy is a genetic neuromuscular disorder of alpha motor neurons in the anterior horn of the spinal cord lower brainstem leading to progressive muscle weakness and atrophy. Physiotherapy plays a crucial role for this patient population as it enhances the muscular strength which ultimately helps in managing activities of daily life.

Purpose: The purpose of the study is focused on the effectiveness of individualised patient- centric rehabilitation is providing marked improvement.

Methods: In our study a 17 years old male had developed problems in running, stair climbing and later getting up from chair since last 2 years, after detailed examination, the patient is diagnosed with Spinal Muscular Atrophy (SMA) - type 4 and then referred for physiotherapy, a detailed assessments muscle strength (lower limb), balance and functional activities are assessed on which, Berg Balance Scale (BBS) and Functional Independence Measure (FIM) scale are used as primary outcomes, a routine physiotherapy including isometrics, strengthening and balancing are strategically introduced in the rehabilitation in the period of 6 month and reassessed.

Results: The results of the primary outcomes show that there is notable percentage improvement in balancing (51.6%) through Berg Balance Scale and in activities of daily life (7.34%) through Functional Independence scale and also there is good muscular strength.

Conclusion: living life with spinal muscular atrophy is challenging, when we focusing more on muscle strength and balance training, it will definitely play a crucial role in managing the functional independence of the patient.

Implications: This study give profound implications for a properly designed personalised intervention is showing notable improvement in the patient, that's enhanced the activities of daily lifestyles.

Keywords: Spinal muscular atrophy, Balance training, Muscle strength

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