motion INFORMATICS

Stimel-03:

Case Studies

FDA CLEARED

Case Study 1

Patient Information

Name: SJ
Gender: Female
Age: Over 65
Location: NY
Date of Stroke: February 15, 2021
Duration of Rehabilitation: Continuation

Background

SJ, a 65-year-old female, experienced a severe ischemic stroke, resulting in left-sided hemiparesis and impaired gait. Her neurological deficits significantly impacted her independence and daily functioning. Seeking effective rehabilitation options, SJ was introduced to the Stimel-03 Rehabilitation Device, known for its targeted muscle stimulation and functional exercise capabilities.

Intervention

SJ underwent a comprehensive stroke rehabilitation program that incorporated the Stimel-03 Rehabilitation Device as a key component. The device utilizes advanced electrical stimulation technology and biofeedback to activate targeted muscles, facilitating neuromuscular reeducation and motor function recovery. SJ's rehabilitation program consisted of regular sessions, combining Stimel-03 therapy (starting on program - Biofeedback 1 and progressing to program Biofeedback 3). At the same time, she continued once a week with traditional rehabilitation techniques, including physical therapy and occupational therapy.

Progress and Results

Throughout the initial 12-month rehabilitation period, SJ exhibited remarkable progress in her motor function recovery. Small improvements were seen after 4 sessions, with major improvements seen following 10 treatments. This is aligned with the Stimel-03 clinical study results, which showed significantly greater improvements of rehabilitation parameters following 10 Stimel-03 treatments when compared to standard of care.

The precise and controlled muscle stimulation provided by the Stimel-03 contributed to increased strength and range of motion in her affected arm. SJ regained the ability to perform activities of daily living, such as grasping objects, dressing herself, and performing self-care tasks independently.

Additionally, the Stimel-03 played a crucial role in SJ's gait rehabilitation. The device's therapeutic modes and adjustable treatment settings allowed for tailored interventions, facilitating the relearning of walking patterns and improving her balance and stability. With consistent use, SJ experienced a significant improvement in her walking ability, reducing her reliance on assistive devices and regaining confidence in her mobility.

Beyond physical gains, SJ's emotional well-being and overall quality of life also improved. The restoration of her motor function and increased independence positively impacted her self-esteem, enabling her to actively participate in social activities and engage in hobbies she previously enjoyed.

Case Study 2

Patient Information

Name: GT
Gender: Male
Age: 58
Location: Los Angeles, CA
Date of Stroke: September 10, 2022
Duration of Rehabilitation: 9 months

Background

GT, a 58-year-old male, suffered a severe hemorrhagic stroke, resulting in right-sided hemiplegia and significant motor impairments. The stroke left him dependent on assistance for even the most basic activities. Eager to regain his independence, GT's healthcare team incorporated the Stimel-03 Rehabilitation Device into his comprehensive stroke rehabilitation program.

Intervention

GT underwent an intensive rehabilitation program that integrated the Stimel-03 Rehabilitation Device as a core component. The device's advanced biofeedback technology allowed for targeted muscle activation and facilitated motor relearning. As GT was unable to get to his therapist often, he used the Stimel-03 at home and visited his therapist once every two weeks to conduct a session with him. In this case, he used the Biofeedback program starting at Biofeedback 1 and progressing to Biofeedback 3.

Progress and Results

Over the course of 9 months, GT made notable strides in his rehabilitation journey. The precise muscle stimulation delivered by the Stimel-03 played a vital role in his motor function recovery. GT experienced improvements in his affected arm's strength, coordination, and range of motion, allowing him to regain essential activities such as feeding, dressing, and writing.

The versatility of the Stimel-03 allowed for customized therapy sessions tailored to his specific needs. The device's adjustable intensity levels and therapeutic modes enabled progressive muscle activation and facilitated neuromuscular reeducation. With consistent use, GT achieved significant gains in his motor control and function, surpassing initial expectations.

Beyond the physical improvements, GT's quality of life underwent a profound transformation. The restoration of his independence and regained ability to perform daily tasks without assistance improved his emotional well-being and fostered a sense of empowerment. GT's enhanced mobility enabled him to actively engage in social interactions and pursue personal interests, reestablishing a fulfilling life post-stroke.

It is important to state that post-stroke recovery is highly time dependent. Therapy should begin early, to capitalize on a sensitive window of heightened neuroplasticity. The most significant improvements occur in the initial weeks post-stroke, often plateauing around three

months, especially regarding motor function. Beyond six months, spontaneous recovery typically stabilizes, resulting in a chronic deficit; however, targeted training or interventions can still yield improvements.

Disclaimer

The case study presented is based on real patient experiences; however, all personal identifying information, including names, ages, locations, and dates, have been altered to protect the privacy and confidentiality of the individuals involved. The purpose of these case studies is to provide general examples of successful rehabilitation journeys using the Stimel-03 Rehabilitation Device. The presented information should not be interpreted as a guarantee of specific outcomes or a reflection of any individual's experience. The results achieved by these patients may not be typical and can vary depending on various factors.