

Question: Does using the LTES Mollii suit subdue symptoms of ataxia and improve function in an adult with multiple sclerosis?

Method: Single case study. The participant is a 40 year old male with primary progressive multiple sclerosis (MS). He was either hoisted for transfers or completed a slide transfer from his wheelchair to bed and vice versa prior to the trial. Over the period of 3 years, the participant engaged in various rehabilitation strategies in both inpatient and community settings. However we did not notice much progress and he was showing a gradual deterioration. The ataxia was so significant that he lost his standing ability within a year. There has been a recent emergence of evidence, indicating the benefits of the Mollii suit (Remotion Ltd) in patients with ataxic symptoms. Therefore with written consent from the patient, we agreed to trial this suit. It uses low frequencies at 20 Hz (below level of muscle contraction to allow spinal cord reflex to allow spinal reflexes to occur). It targets spinal reflexes to alleviate their disruption, based on the mechanisms of activity versus underactivity in any upper motor neuron lesion. It selects the underactive muscles over the over active at the spinal cord level (reciprocal inhibition). Modified Fatigue Impact Scale, Motricity Index, Scale for the Assessment and rating of ataxia(SARA), Arm Activity Measure(ArMA), video of arm movements and slide transfers were utilised as outcome measures. Apart from wearing the Mollii suit wear for an hour every day, he also participated in intense routine rehabilitation as earlier. **Results:** The participant demonstrated significant progress in all the measures; Modified Fatigue Impact Scale-42% progress; Motricity Index (Trunk score 278%, Arm score: 51%, Leg score: 32%); SARA-significant increase in control and co-ordination reflected in the reduction of scores in each tasks was observed and ArMA-Section A : 18%, Section B: 24% progress were observed. Videos of pre and post intervention demonstrated significant progress in the quality of functional tasks. He was also able walk 100 metres using the pulpit frame with assistance. Participant also demonstrated increased independence in feeding and drinking. We are planning to repeat the measures after 4 weeks and 8 weeks to monitor progress. **Conclusion:** It was clearly evident that the Mollii suit was very beneficial to control ataxic movements and demonstrate significant improvements in functional tasks.