

(S18) Efficacy of TheraTogs in Ambulatory Patients with Multiple Sclerosis

Background: TheraTogs (TheraTogs, Inc, Telluride, CO, USA) are a type of orthosis composed of an inner foam layer that grips the skin and a Velcro-sensitive outer layer to which clinicians and caregivers can affix elastic strapping. The elastic strapping creates proprioceptive stimulation of the weak muscles and improves inhibition of their antagonists. The AISM Rehabilitation Center began to use this orthosis 1 year ago. Patients with multiple sclerosis (MS) start using the orthosis after the rehabilitation program. In ataxic patients, the aim is to improve trunk stabilization and ambulation, while in patients with spasticity, the purpose is to improve the recruitment of the weak muscles during gait or, in the case of nonambulatory patients, to improve the sitting posture. All patients report a feeling of comfort, and the physicians observe an immediate beneficial effect on base of support and on static and dynamic alignment.

Objective: The objective of this study was to evaluate the immediate effectiveness of TheraTogs for impaired gait in people with MS.

Materials and Methods: The study will involve 25 MS patients with an Expanded Disability Status Scale (EDSS) score of ≤ 6.5 . Patients with physical fatigue measurable with the Modified Fatigue Impact Scale (MFIS) (physical score $>20/36$) and/or without the necessary caregiver assistance with wearing the aid at home are excluded from the study. Before and after wearing this aid, all patients are filmed and undergo the Ambulation Index and Timed Walking Test (primary outcomes) and stabilometric and baropodometric evaluation with the Physical Support System platform (secondary outcomes). Finally, a visual analogue scale (VAS) for subjective evaluation of the aid's effectiveness is administered.

Preliminary Results: Currently, 17 subjects have been enrolled in the study (14 females and 3 males; mean age 52). Seven subjects (6 females and 1 male) have ataxia, 6 subjects (5 females and 1 male) have spasticity in both lower limbs, and the remaining 4 subjects (3 females and 1 male) have hemiparesis. All patients had changes in secondary outcomes but not in primary ones. The final results will be presented with statistical analysis.

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