(S47) THE REHABILITATION NEUROFUNCTIONAL AND VIRTUAL REALITY IN REHABILITATION


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Background: Multiple sclerosis (MS) is a chronic degenerative neurologic and demyelinating disease affecting the central nervous system. Fatigue and loss of balance during gait are the most frequent symptoms. The use of virtual reality in rehabilitation complements therapies with fun, improving sight, touch, and hearing. It can be executed in a functional context with body movements through virtual space as with performing daily activities. Objectives: Compare conventional physiotherapy with a virtual reality program. Methods: Twelve patients with Expanded Disability Status Scale (EDSS) scores up to 6 were randomly divided into three groups. They were evaluated before and after the program with the following scales: EDSS, Chalder Fatigue Scale, Berg Balance Scale, Dynamic Gait Index. The first group had 18 sessions of conventional physiotherapy, the second had 18 sessions of playing virtual reality games, and the third had 9 sessions of conventional physiotherapy and 9 sessions of playing virtual reality games. Results: On the Berg Balance Scale there was an improvement of 16% in the group receiving only physiotherapy, 6.2% in the group receiving physiotherapy and virtual reality, and 6.35% in the group receiving only the virtual rehabilitation. On the Dynamic Gait Index, there was an improvement of 38%, 7.6%, and 41% for the physiotherapy, physiotherapy and virtual reality, and virtual reality groups, respectively. On the Chalder Fatigue Scale, there was a reduction in fatigue of 8.8% in the physiotherapy group, 14.8% in the physiotherapy and virtual reality group, and 24.6% in the virtual reality group. Conclusions: Virtual reality was found to be an efficient tool in the balance rehabilitation of MS patients. The similar improvement among the three groups shows that virtual reality should be a complement to conventional rehabilitation, improving motor performance and making treatment more fun.

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