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Digital telemedicine in functional motor disorders: preliminary data on the health outcomes from a randomized controlled trial

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Introduction: Functional motor disorders (FMDs) are highly disabling conditions associated with long-term disability, poor quality of life, and economic burden on health and social care [1-2]. While multidisciplinary 5-day rehabilitation programs have been shown to reduce motor and non-motor symptoms, long-term management and monitoring in FMDs remain unmet [3-4]. To date, no randomized controlled trials are evaluating the effectiveness of Digital telemedicine in the management of patients with FMD.

Objective: To report preliminary data to form a single-blind randomized-controlled trial (RCT) with 2-parallel arms to demonstrate the effectiveness of a 5-day intensive rehabilitation treatment followed by a digital telemedicine program on the motor, non-motor symptoms (pain, fatigue, anxiety, and depression), the self-perception of clinical change and Health-Related Quality of Life in patients with FMDs.

Methods: 51 FMD patients were randomly assigned to receive either a Digital Telemedicine program (n = 24) or a control program (n = 27). Digital Telemedicine Program consisted of an individualized intensive 5-day rehabilitation program (2 hours/day, five days/week, one week) by a qualified physiotherapist at the USD Parkinson's Disease and Movement Disorders Unit of Verona (Italy) followed by an individualized self-management program implemented with the Digital Telemedicine platform support (1 day/week with synchronous treatment; 2 days/week asynchronous, 24 weeks, with activity monitoring with wearable devices). The Control Program consisted of the same individualized intensive 5-day rehabilitation program (2 hours/day, five days/week, one week) of the Telemedicine Group followed by a home-based self-management plan (Treatment, as usual, one day, three days/week, 24 weeks) without any Digital Telemedicine platform support and wearable device. Patients were evaluated before treatment (T0), after treatment (T1), and at 3-month follow-up (T2).

Results: Overall, both groups showed a favorable trend over time with a progressive reduction in the severity of motor and non-motor complaints (fatigue, pain, anxiety, depression). The control group, however, at the 3-month follow-up (T2) reported a higher percentage of patients (15%) reporting a worse perception of their health status than the telemedicine group (6%).

Conclusions: This study provides novel preliminary evidence for a multidisciplinary digital telemedicine program's effect on patients with FMDs. Our preliminary data suggest that it may positively affect the patient's perceived health. The Brain Research Foundation Verona ONLUS supports this ongoing study.

References:

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