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A PAIN NEUROSCIENCE EDUCATION PROGRAM FOR FIBROMYALGIA PATIENTS WITH COGNITIVE DEFICITS: A CASE SERIES

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Background: The literature has suggested that Pain neurophysiology education (PNE) can have positive effects on pain, disability and maladaptive pain cognitions in fibromyalgia (FM) patients but no significant changes in these variables have been found in response to PNE in FM patients. Reasons for these findings may relate with the design of the PNE programmes, traditionally composed of only 1 or 2 sessions with a wide variety of complex contents, which do not take into account the memory and concentration problems identified in those patients.

Purpose: This case series aims to describe the effects of a combined programme of PNE and exercise for FM patients. The PNE was specifically designed for FM patients with cognitive deficits and included 6 sessions of PNE in a face-to-face format complemented with an educational booklet, the discussion of a case study and involvement of family members in treatment sessions.

Methods: Nine consecutive patients with a diagnosis of FM and concentration and memory problems (identified by the concentration subscale of the checklist of Individual strength- CIS-20, and a numeric scale to access memory) were included in this case series. All patients underwent in a 6-week programme (first 3 weeks) followed by 6 sessions of individualized exercise (aerobic exercise, motor control training and aquatic exercise). Participants were assessed at the baseline, 3 and 6 weeks, and at 3 and 6 months follow-ups. Outcomes measures included the Numerical Pain Rating Scale, the Tampa Scale of Kinesiophobia, the Pain Catastrophizing Scale, and the Patient Global Improvement of Change Scale.

Results: All 9 participants were women with a median age of 53 years (range: 38–64). Six weeks after the beginning of the intervention, all the patients reported perceived benefits in perception of overall change, and 7 of the 9 patients (78%) demonstrated a clinically meaningful improvement in pain intensity. Of the 9 participants, 8 exhibited reductions in pain catastrophization and 7 in kinesiophobia. However, at the 6 months follow-up, the proportion of patients with a clinically meaningful improvement in pain intensity and in the perception of overall change decreases to 5/9 and 7/9, respectively.

Conclusion: This case series suggests that an adjusted programme of PNE followed by individualized exercise could change maladaptive pain cognitions and decrease pain intensity in FM patients. The dilution of the course content for several sessions and the inclusion of additional learning strategies may have been critical for these results.

Implications: This study's results suggest that cognitive characteristics of FM patients should be considered in the design of PNE programmes in order to optimize their results. However, since a cause-effect relationship cannot be deduced from this case series, a randomized controlled trial should be taken into account to evaluate the effectiveness of this programme in FM patients.

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