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FRI0708-HPR PROGNOSTIC FACTORS ASSOCIATED WITH AN EARLY RESPONSE TO PHYSIOTHERAPY TREATMENT IN PATIENTS WITH CHRONIC NONSPECIFIC NECK PAIN: AN EXPLORATORY PROGNOSTIC MODEL

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Background: Chronic nonspecific neck pain (CNP) is a common health problem worldwide. Previous studies identified sociodemographic and clinical factors associated with successful outcomes in patients at discharge of physiotherapy treatment. However, the prognostic factors associated with an early response to physiotherapy treatment in patients with CNP are unclear. This knowledge may allow to identify a profile of patients with higher odds of improvement at the beginning of treatment, supporting clinical decision-making considering benefits versus non-benefits at short-term.

Objectives: This study aimed to identify prognostic factors associated with an early successful response to Physiotherapy treatment in patients with CNP. The successful response was defined as a reduction on disability of $\geq 30\%$ after 3-weeks of physiotherapy treatment.

Methods: A prospective cohort study was conducted on 52 patients with CNP lasting ≥ 3 months, undergoing a physiotherapy treatment programme of mobilisation and exercise (coordination, strength, endurance). Patients were assessed at baseline, and then 3-weeks later. Participants were categorised as having a successful outcome if they scored a difference in their disability above the Minimal Clinical Important Difference (MCID) of the Neck Disability Index (NDI). Logistic regression analysis (backward stepwise conditional method) was used to identify the associations between baseline prognostic factors and outcome. Socio-demographic and clinical characteristics of CNP were included as potential prognostic factors.

Results: A total of 51 participants completed the intervention. At 3-weeks post-treatment, 75% (38/51) of the participants achieved a successful response to physiotherapy treatment. In the final multivariate model (Omnibus Tests $p < 0.001$), an early successful response to Physiotherapy treatment was significantly associated with the disability score (OR 1.16 – CI 95% 1.02-1.32), and pain intensity (OR 1.81 – CI 95% 1.03-3.20) at the baseline. This model improves the classification ability from 74.5 to 86.3%, explaining 50.6% of the outcome, with good predictive ability of sensibility (94.5%) and modest specificity (61.5%). The area under the ROC curve for disability score (0.8; 95% CI: 0.6-0.9) and pain intensity (0.7; 95% CI: 0.5-0.9) indicated good and acceptable discriminatory ability, respectively. After 3-weeks of mobilisation and exercise, the patients with scores ≥ 12 on NDI and ≥ 7 on Numeric Pain Rating Scale at baseline have increased odds of achieving an early response to treatment in the presence of both variables (+LR=1.71 95% CI: 0.84-3.50) or one variable (+LR=1.45 95% CI: 0.69-3.04).

Conclusion: This study suggests that patients with medium to high levels of disability and high levels of pain at the baseline, treated with a physiotherapy programme of mobilisation and exercise, are more likely to experience an early reduction on their disability score. References:

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FRI0709-HPR EFFECTS OF LAND- AND WATER-BASED EXERCISE INTERVENTIONS ON PAIN IN PEOPLE WITH FIBROMYALGIA: A PRELIMINARY REPORT FROM THE AL-ÁNDALUS RANDOMISED CONTROLLED TRIAL

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Background: Non-pharmacological approaches are the mainstay of treatment in fibromyalgia. The current recommendations of the European League Against Rheumatism (EULAR) for the management of fibromyalgia highlight that exercise is the only therapy with a 'strong' evidence [1]. Exercise has been typically implemented on either land- or water-based settings. However, it is unclear whether to perform exercise in different settings has different effects on pain; this knowledge might help to maximise the beneficial effects that exercise has in fibromyalgia [2]

Objectives: To compare the effects of two exercise interventions (land- and water-based training) on pain in people with fibromyalgia.

Methods: From 272 initially randomized, a total of 151 participants (50.6 $\pm$ 7.6 years old, 98% women) completed all the assessments and attended to at least 70% of the programme; 48, 42 and 61 participants pertained to the land-based exercise, water-based exercise, and usual care (control) groups, respectively. The intervention groups trained 3 non-consecutive days/week (45-60 minutes per session) for 24 weeks. Each session included aerobic exercises, muscular strengthening and stretching for all the major muscle groups. Pain was measured by the 0-100 mm visual analogue scale (VAS) from the Fibromyalgia Impact Questionnaire (FIQ). Catastrophizing and self-efficacy pain-related cognitions were assessed by the Pain Catastrophizing Scale (PCS total score) and pain management subscale (PSE) of the Chronic Pain Self-efficacy Scale (CPSS), respectively. We calculated an algometer score based on the sum of pain thresholds (kg/cm²) of the 18 tender points according to the 1990 American College of Rheumatology fibromyalgia diagnostic criteria. Participants were evaluated at baseline (pre-test), at the end of the 24-week intervention (post-test) and after a 12-week detraining period (re-test).

The groups were comparable in sociodemographic and clinical characteristics; they only differ on age, which was included as a covariate along with baseline levels of pain.

Results: Adjusting for Bonferroni, most of the between-group comparisons of pain changes over time were not significant. As exceptions, in comparison to the control group, participants in the land-based exercise group lowered catastrophizing and improved algometer score at the post-tests; mean difference (95% interval confidence) [MD(95% CI)] = -4.0 (-7.5 to -0.5) and 6.2 (2.0 to 10.5), respectively. These differences became non-significant at the re-test.

Conclusion: These preliminary results suggest that a 24-week land-based exercise intervention had beneficial effects by reducing pain catastrophizing and increasing algometer score in people with fibromyalgia. However, these benefits were unsustained after the detraining period. In comparison to the control group, a water-based exercise intervention did not show any effect on pain. Although our findings suggest that a land-based exercise intervention may have short-term beneficial effects on pain, these findings must be considered as preliminary until more robust analyses are performed.

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FRI0710-HPR EFFECTIVENESS OF EXERCISE IN THE MANAGEMENT OF FATIGUE AND SLEEP QUALITY IN FIBROMYALGIA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Non-pharmacological interventions are the mainstay of treatment for fibromyalgia, however, current evidence-based guidelines report that the only therapy supported by 'strong for' evidence is exercise intervention for pain in fibromyalgia [1]. While increased fatigue and poor sleep quality are among the most burdensome symptoms in fibromyalgia, there remains limited evidence for the effectiveness of exercise in the management of these symptoms [2,3].

Objectives: To determine the effectiveness of exercise in the management of fatigue and sleep quality in fibromyalgia.

Methods: A systematic search was conducted using PubMed and Web of Science in October 2018 (Prospero Registration No. CRD42018118005). Eligible studies were randomised controlled trials (RCT) including adults with fibromyalgia (population), who received exercise (intervention) compared to usual care (comparator). Outcomes of interest were fatigue and/or sleep quality. No restrictions were applied for language nor for publication date. Random effects meta-analyses were conducted. The Cochrane Collaboration's tool was used for assessing risk of bias in the included studies. The quality of evidence was evaluated using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework.

Results: Twenty RCTs were included, 17 included measures of fatigue (n=1003) and 12 measures of sleep quality (n=731). In comparison to usual care, exercise had beneficial effects on fatigue (Figure 1, P<0.001) but not on sleep quality (Figure 2, P=0.06). The most beneficial interventions for fatigue and improving sleep quality, were those in which fatigue was the primary outcome and those based on body-mind interventions, respectively (both, P<0.001). A moderate risk of bias was present in most of the included studies.

Conclusion: According to the GRADE framework, this review provides low-to-moderate quality evidence that exercise is moderately effective for improving fatigue, and moderate evidence of no/meaningless effects of exercise to improve sleep quality. Further high quality RCTs are required to determine the effectiveness of exercise on fatigue, and in particular, sleep quality in fibromyalgia.

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Figure 1. Pooled effects of randomised controlled trials analysing the effectiveness of physical exercise on reducing fatigue in people with fibromyalgia.

Figure 2. Pooled effects of randomised controlled trials analysing the effectiveness of physical exercise on enhancing sleep quality in people with fibromyalgia.

Analyses were conducted using a random effects model. CI, Confidence Interval; df, degrees of freedom; Std, Standardised; SD, Standard Deviation; IV, Inverse Variance; Co-, Co-intervention (Photo, phototherapy; edu, education); C, Cardiorespiratory exercise; F, flexibility exercise; S, Strength training; TC, Tai Chi; QG, Quigong; Y, Yoga; L- and W-B, land- and water-based exercise, respectively.

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FRI0711-HPR PATIENT PERSPECTIVES ON HOW TO IMPROVE MEDICATION EDUCATION

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Background: EULAR recommends that people with inflammatory arthritis should have access to and be offered patient education throughout the course of their disease (1). The content and delivery of patient education should be individually tailored (2). Patients should be educated on their medication and know its purpose, mode of action, possible side effects and monitoring guidelines (3). Improving patients' ability to make informed choices and to use medication effectively and safely should result in significant benefits for the health service and improve patient well-being (4). Our institute's yearly Consumer Quality Index (CQI) revealed that our current medication education needs improvement.

Objectives: To improve medication education from the patient perspective.

Methods: A representative cross-sectional sample of 100 rheumatoid arthritis patients was invited to complete a specially designed questionnaire, based on the Satisfaction with Information about Medicines Scale (SIMS) questionnaire (5). All caregivers at our Rheumatology unit (rheumatologists, trainees, rheumatology nurses) participated in single-blinded structured observational sessions of their regular patient consultation with the patient's consent. Data was collected on the type and content of medication information that was given during the consultation. Local ethical approval was obtained and patient confidentiality was assured.

Results: At present 40 (40%) patients returned the questionnaire. Overall, patients are satisfied with the medication education provided (average overall satisfaction score of 7.4 (0-10). However patients experienced insufficient education on the following topics;

- whether the medication has influence on sex life
- the risk of having side effects
- how to act when side effects occur
- possible interaction with concomitant medication
- whether the medication can cause drowsiness

Between December 2018 and January 2019 caregivers at our unit (4 rheumatologists, 2 trainees, 1 nurse) participated in multiple single-blinded observational sessions. In 100% of observed consultations medication information was provided. However, most caregivers did not address the topic of side effects during their consultation. Furthermore, in all cases caregivers failed to document in the electronic patient file which information was provided.

Conclusion: Rheumatoid arthritis patients express overall satisfaction with medication education but experience an unmet need for information on possible medication effects on their sex life, medication side effects and on interaction with concomitant medication. Further analysis of the questionnaires will be performed and a plan of improvement will be implemented to meet the patients need for more and better education on medication. Patient medication education will be implemented in a continuous cycle of improvement.