OP0099

EFFECTIVENESS OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION IN PATIENTS WITH FAILED BACK SURGERY SYNDROME

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Background: Failed back surgery syndrome (FBSS) is the term of persistent back and/or leg pain after lumbar surgery (1). Repetitive transcranial magnetic stimulation (r-TMS) is a technique that allows non-invasive and relatively painless stimulation of cerebral cortex. It can reduce the experience of chronic pain by using magnetic field to produce small electrical currents in the cortex (2).

Objectives: The aim of this study is to determine the effectiveness of r-TMS treatment on patients with FBSS.

Methods: In this double-blinded, randomized, placebo-controlled trial, 20 patients (aged 34-65 years) clinically diagnosed as FBSS, who had a history of surgery for lumbar disk herniation with persistent back and leg pain. Only patients with no root compression in postoperative magnetic resonance imaging of lumbar spine were included. Patients were randomly assigned to r-TMS (n:10) and sham (n:10) groups. Patients in r-TMS group received 5 Hz of r-TMS, as a 20-min (1000 pulses) daily session, 5 days per weeks, for a total of 10 sessions. R-TMS applied with MagVenture device (MagPro X100, Denmark, 2009) and figure eight coil (MMC 140 parabolic, MagVenture). Control group received sham r-TMS with the same protocol. Patients were assessed before and after the 1st and 5th sessions, at the end of the treatment and at 2 weeks, 1 month and 3 months after treatment. Visual Analogue Scale (VAS), DN-4, Oswestry Disability Index (ODI), Beck Depression Inventory (BDI), Pittsburgh Sleep Quality Index (PSQI) were used for evaluation.

Results: There were no statistically significant differences between the groups for age, sex, number of surgery, pain duration, working status and drug usage. Significant improvements were achieved in DN4, ODI, BDI and PSQI scores in r-TMS group in comparison to sham group. Both groups displayed improvements in VAS scores while improvement in the sham group was limited to first month. Achieved improvements in r-TMS group in terms of VAS, DN4, ODI, BDI and PSQI scores were sustained at third month.

Conclusion: Repetitive transcranial magnetic stimulation might be an effective treatment alternative in patients with FBSS, further studies with larger groups are needed.

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OP0100

THE EFFECT OF COMBINED PREGABALIN AND DULOXETINE IN FUNCTIONAL STATUS, QUALITY OF LIFE AND PSYCHOLOGICAL STATUS IN FIBROMYALGIA

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Background: Fibromyalgia syndrome (FMS) is a chronic pain syndrome that characterized by chronic widespread pain, muscle tenderness and is often accompanied by fatigue, sleep disturbance, and depressive moods¹. Pregabalin and duloxetine are thought to reduce pain by different pharmacological actions, and the studies for combining different treatments in FMS are limited².

Objectives: Assessment of the effectiveness of combined pregabalin and duloxetine in functional status, quality of life and psychological status in fibromyalgia

Methods: One hundred and twenty adult patients of primary FMS (according to the 2010 ACR criteria for FMS) participated in this study. Patients with other source of chronic pain as inflammatory or degenerative rheumatic diseases, severe debilitating systemic diseases were excluded; also we excluded patients with any previous psychiatric disorders and patients who had any

contraindications for the used treatments. After written consent; the patients were randomly divided into 4 equal groups; group I were given pregabalin (200 mg divided twice daily) for 6 months, group II were given duloxetine (60 mg divided twice daily) for 6 months, group III were given combined therapy (200 mg divided twice daily of pregabalin plus 30 mg daily single dose of duloxetine) for 6 months, group IV were given placebo treatment, any other previous treatments were stopped before starting this study. The patients were assessed at baseline, after 3 and 6 months of treatment by Fibromyalgia Impact Questionnaire (FIQ), Medical Outcomes Study Questionnaire Short Form 36 Health Survey (SF-36), Hospital Anxiety and Depression Scale (HADS) and serum beta endorphin.

	Baseline					After 3 months					After 6 months				
	G1	G2	G3	G4	SD	G1	G2	G3	G4	SD	G1	G2	G3	G4	SD
FIQ	88.5	88.7	89.2	87.8	75.4	86.1	86.9	86.3	86.8	76.1	86.5	86.5	86.5	86.5	76.1
SF-36 (Total score)	88.9	88.6	88.5	87.7	74.5	85.8	86.0	85.9	86.2	75.7	86.2	86.2	86.2	86.2	75.7
HADS anxiety	8.8	8.8	8.8	8.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
HADS depression	8.8	8.8	8.8	8.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
B-endorphin	88.2	88.1	88.0	87.9	78.2	88.1	88.1	88.1	88.1	78.2	88.1	88.1	88.1	88.1	78.2

Table 1: Pre- and post-treatment clinical measurement of the patient groups

Results: In this study 115 patients completed the study. There was no significant difference between all groups in demographic data or educational status. At baseline there were no significant differences between all groups regarding FIQ, SF-36, HADS. Patients in all groups had low levels of β -Endorphin at baseline (82.7 ± 14.8 , 84.1 ± 12.7 , 83.9 ± 11.4 , and 82.3 ± 16.6 respectively). There was significant improvement ($P < 0.05$) in FIQ, SF-36 and HADS in groups I, II and III after 3 and 6 months of treatment, while there was no significant improvement ($P > 0.05$) in group IV. There was significant better improvement ($P < 0.05$) in group III than in group I and II. The levels of serum β -Endorphin were significantly elevated in the first 3 groups only ($P < 0.05$) with no significant difference between the 3 groups ($P > 0.05$). The results of the study are summarized in table 1.

Conclusion: The combination therapy of pregabalin and duloxetine is more effective than monotherapy in treatment of fibromyalgia

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OP0101

COMPARATIVE EFFECTIVENESS OF LAND AND WATER-BASED EXERCISE ON QUALITY OF LIFE OF PATIENTS WITH FIBROMYALGIA: PRELIMINARY FINDINGS FROM THE AL-ÁNDALUS RANDOMISED CONTROLLED TRIAL

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Background: Compelling evidence supports the efficacy of physical exercise in the management of fibromyalgia (FM)¹. Although exercise interventions have typically focused on either land or water-based programs, research comparing the efficacy of both protocols is limited.

Objectives: The aim of this study was to compare the effect of two exercise interventions (land-based and water-based training) on quality of life (QOL) of patients with FM.

Methods: Among the 272 participants initially randomized, a total of 151 (age: 50.6 ± 7.6 years, 98% women) completed all the assessments with an attendance $\geq 70\%$ (land-based $n=48$, water-based $n=42$, control $n=61$). The intervention groups trained 3 non-consecutive days/week (60 minutes per session) during 24 weeks. Each session involved exercises to improve cardiorespiratory fitness, muscular strength, and flexibility. Physical and mental domains of QOL were assessed

through the 36-item Short Form Health Survey (SF-36). Participants were evaluated at baseline (pre-test), at the end of the intervention (post-test) and following a detraining period of 12 weeks after the end of the intervention (re-test). Land-based, water-based, and control groups were comparable in sex, sociodemographic characteristics, disease duration, drugs intake, and BMI. Age, tenderness, and baseline outcomes values were used as covariates in the comparisons of the changes from baseline (post-test vs. pre-test and re-test vs. pre-test) between groups

Results: Post-intervention changes from baseline in QOL dimensions in the land-based exercise group were better for physical role (compared to the control and water-based groups; all, $p < 0.01$), bodily pain, general health, social function, emotional role, mental health, and mental component (compared to the control group; all, $p < 0.05$). Post-intervention changes from baseline in the water-based exercise group were not statistically significant compared to land-based or control groups ($p > 0.05$). After a detraining period of 12 weeks, changes in QOL from baseline in the land-based exercise group were better for physical role, bodily pain (compared to the control and water-based exercise groups; all, $p < 0.01$), physical function and physical component (compared to the water-based exercise group; all $p < 0.05$). No significant changes in QOL after the detraining period from baseline were observed in the water-based exercise group compared to land-based or control groups ($p > 0.05$).

Conclusion: A land-based exercise intervention improved FM patients' QOL, whereas a water-based exercise intervention showed no significant effect. Improvements in the physical role and bodily pain domains of QOL were sustained in a 12-week detraining period. Land-based exercise might be an easily accessible treatment option that improves QOL to a greater extent than water-based exercise for FM patients.

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OP0102 INTERVERTEBRAL DISC THERAPIES FOR NON-SPECIFIC CHRONIC LOW BACK PAIN: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Intervertebral disc therapies (IDT) for the management of non-specific chronic low back (NSCLBP) pain are raising interest (1).

Objectives: To review evidence on the benefits and harms of IDT in people with NSCLBP.

Methods: We searched 4 databases and conference abstracts, from inception to July 2018, for randomized trials of IDT versus placebo interventions, active comparators or usual care. Two independent investigators extracted data and assessed the risk of bias. The primary outcome was LBP intensity at short, intermediate and long terms (2). Secondary outcomes were LBP-specific activity limitation and safety (3). Our review was registered with the International Prospective Register of Systematic Reviews (CRD42019106336).

Results: Of 17 eligible trials, 5 trials (436 patients) assessed glucocorticoid (GC) IDT and were included in a quantitative synthesis. Twelve trials assessed IDT of other products including ozone (n=2, 140 patients), methylene blue (n=1, 72 patients), stems cells (n=1, 24 patients), glycerol (n=1, 11 patients), etanercept (n=2, 96 patients), tocilizumab (n=1, 60 patients), platelet-rich plasma (n=1, 47 patients), chymopapaine (n=1, 39 patients) and rhGDF-5 (n=2, 55 patients) and were included in a narrative synthesis. Standardized mean differences (SMD) of GC IDT for LBP intensity and activity limitations were -1.33 (-2.34;0.32) and -0.76 (-1.85;0.34) at short-term, -2.22 (-5.34;0.90) and -1.60 (-3.51;0.32) at intermediate-term and -1.11 (-2.91;0.70) and -0.63 (-1.68;0.42) at long-term, respectively. OR of GC IDT for serious and minor adverse events were 1.13 (0.20; 4.59) and 0.97 (0.49;1.91).

Conclusion: GC IDT are associated with a reduction in LBP intensity at short-term in people with NSCLBP. Positive effects are not sustained. There is no effect on activity limitations.

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OP0103 EFFECTS ON A FRENCH MASS MEDIA CAMPAIGN ON BACK PAIN BELIEFS AND BEHAVIORS

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Background: Low back pain (LBP) in general and chronic LBP specifically is frequent with high impact on both individuals and Society. In 2017, the French national public health insurance (CNAMTS, Caisse Nationale d'Assurance Maladie des Travailleurs Salariés) has decided to launch a countrywide mass media campaign to improve general population (POP) and general practitioners (GPs) beliefs and behaviors about LBP and tend to reduce its impact on health resource use and including sick leaves.

Objectives: To evaluate the impact on population and physician beliefs and behaviors of the nationwide population-based campaign on LBP.

Methods: A campaign was conducted by the CNAMTS with the help of health experts (rheumatologists, rehabilitation specialists, algologists, GP and physiotherapists). It ran between November 2017 and November 2018, using multi media: booklets for POP and GPs available on CNAMTS website, TV and radio spots, large size wall posters hanged in public areas, videos on social networks, publicity articles and a smartphone application. The campaign main messages were: "LBP is not a severe disease" and "rest doesn't help to heal" with a tagline: "Low back pain? The right treatment is the movement". The impact of the campaign was assessed by internet surveys conducted by a private polling company (BVA, Brulé, Ville et Associés), in random samples of the two populations (POP and GP). The respondents were selected according to the quota method, which enabled adequate representativeness based on sex, age, region of living and socio-economic status. The pre-test survey was performed on June 2017 and the post-test in May 2018, 6 months after beginning of the campaign. The questions explored different domains: 1) memorization, understanding and perception of the campaign, 2) knowledge and beliefs about LBP, and 3) repercussions on behaviors. Statistical significance at 5% was assessed with student test for means and sd, and chi2 test for categorical variables.

Results: Among the 2000 POP, 92% have already experienced LBP with mean pain intensity of 5.7/10 on VAS. Among the 400 GPs, 74% reported to be consulted for LBP almost every day. 35% of the POP and 74% of GPs saw, read or listened to the campaign. Overall, it was well perceived with an average rating of 7.0 and 7.3/10, respectively. POP and GP beliefs and behaviors about LBP are summarized in the table 1. There were statistically significant improvements in beliefs and behaviors related to activity in both populations. GPs are more confidence in preventing chronicization of back pain and declare to prescribe less sick leave superior to 5 days.

Table 1. Evolution in beliefs and behaviors concerning LBP in GPs and POP before and after campaign

Questions	% of agreement		p
	Pre-test	Post-test	
POP	n=2000	n=2000	
Beliefs			
We have to maintain activity	56%	74%	<.001
The best treatment is rest	68%	45%	<.001
Behaviors			
You try to continue daily life independently of pain	46%	54%	<.001
You practice activity to heal	15%	25%	<.001
GPs	n=400	N=400	
Beliefs			
We have to maintain activity	88%	95%	=.001
The best treatment is rest	33%	14%	<.001
It is easy to prevent chronicization	31%	43%	<.001
Behaviors			
% of sick leaves >5 days prescribed last year	51%	33%	<.001

Conclusion: The French media campaign appears to have significant impact on public and physicians beliefs, mainly related to the message of staying active. An additional campaign focused on employers and occupational therapists is