healthy controls, and verify associations of these measures with brain-derived neurotrophic factor (BDNF).
Methods: Participants were 63 women, aged 18 to 75 years. Transcranial Magnetic Stimulation (TMS) was used to measure motor-evoked potential (MEP), intra-cortical facilitation (ICF), short-intracortical inhibition (SICI) and silent-period (SP). A Quantitative sensory testing (QST) assessed Heat-pain-threshold (HPTh) and the Conditioned pan modulation task (CPM-task) assessed changes in the perception of heat pain as a measure of DPMS function. BDNF was dosed from blood samples. Validated instruments assessed other clinical outcomes.
Results: The mean of SICI was 53% larger in FM compared to MDD [1.03(0.50) vs. 0.55(0.43)] and 67% when compared to HC [1.03(0.50) vs. 0.34(0.19)]. FM patients had a mean of ICF 24% [(0.33(0.23) vs. 1.39(1.02)] lower than MDD and 29% lower than HC [(0.33(0.23) vs. 1.14(0.27)]. The inhibition of the DPMS (CPM-test) was 112.29 % lower in FM compared to MDD [0.22(1.37)vs.−0.87(1.49)]. In FM, the change in the heat stimulus during the CPM-task was inversely correlated the SICI; rho=−0.49 [CI(95%)= −0.78 to −0.03]. The BDNF (adjusted-index for age and medication use) was positively correlated with the disinhibition of the DPMS (rho=0.35 [CI(95%)= 0.02 to 0.61).
Conclusions: These findings support the hypothesis that FM has different pathological substrates from depression. They suggest that an up-regulation phenomenon of intracortical inhibitory networks associated with a disruption of the DPMS function occurs in FM.
Keywords: *descending pain system, Fibromyalgia, Pain*

A5

Forced-exercise and transcranial direct current stimulation (tDCS) provide antinociceptive effects and modulate inflammatory and neurotrophic parameters in the spinal cord in a chronic pain model: long-term effects

Stefania G. Cioato1,2,7, Bettega C. Lopes1,2,3, Liciane F. Medeiros1,2,5, Helouise R. Medeiros1,2,4, Vanessa S. Souza1,2,7, Camila L. Oliveira1,2,7, Felipe Fregni6, Wolnei Caumo4, Iraci L. S. Torres1,2,3,4,7.
ISBN: 978-1-7342025-1-9
1Laboratório de Farmacologia da Dor e Neuromodulação: Modelos Animais, Departamento de Farmacologia/UFRGS,
2Unidade de Experimentação Animal (UEA) - Hospital de Clínicas de Porto Alegre – HCPA, 3Programa de Pós-Graduação em Ciências Biológicas: Fisiologia/UFRGS,
4Programa de Pós-Graduação em Medicina: Ciências Médicas/UFRGS,
5Programa de Pós-graduação em Saúde e desenvolvimento humano, Universidade La Salle 6Laboratory of Neuromodulation, Department of Physical Medicine & Rehabilitation, Spaulding Rehabilitation Hospital and Massachusetts General Hospital, Harvard University.
7Programa de Pós-Graduação em Ciências Biológicas: Farmacologia e Terapêutica/UFRGS

Objective: Investigate antinociceptive and neuromodulatory effects of association between exercise and/or tDCS in a chronic neuropathic pain model (NP) in rats.
Methods: 78 adult Wistar rats were randomized into groups: Control; Sham-Pain; Sham-Pain+Exercise; Sham-Pain+Sedentary+Sham-tDCS; Sham-Pain+Sedentary+tDCS; Sham-Pain+Exercise+Sham-tDCS; Sham-Pain+Exercise+tDCS; Pain; Pain+Exercise; Pain+Sedentary+Sham-tDCS; Pain+Sedentary+tDCS; Pain+Exercise+Sham-tDCS; and Pain+Exercise+tDCS. NP was induced by sciatic chronic constriction(CCI). Mechanical and thermal hyperalgesia were assessed using von Frey(VF) and Hot Plate(HP) tests at baseline, 7th and 14thdays after CCI; immediately, 24h and 7days after treatment. Rats were subjected to treadmill and/or tDCS 0.5mA/20min/day/8days from 15thday. At 48h or 7days after treatments, rats were decapitated, spinal cord was collected for BDNF and IL-4 analysis. Behavioral data were analyzed by GEE/Bonferroni and biochemical data by one-way ANOVA/SNK(P<0.05 considered significant). Approved by CEUA-HCPA#20170061.
Results: There was interaction between groupXtime upon mechanical and thermal hyperalgesia(P<0.05). On 7th day after CCI, sham-pain and pain groups exhibited hyperalgesia(P<0.05), and on 14th day, only pain groups exhibited hyperalgesia. Exercise and/or tDCS partially reverted mechanical hyperalgesia in pain groups immediately, 24h and 7days after treatment; tDCS+Exercise in pain group showed slightly improvement at 7days(P<0.05). tDCS and/or exercise reverted thermal hyperalgesia at all times after treatments(P<0.05). Pain and Pain+Sedentary+Sham-tDCS groups displayed increased BDNF levels at 48h and 7days compared to other groups (P<0.05). Sham-Pain+tDCS and Pain-sedentary+tDCS groups showed an increase in IL-4 levels ration to other groups at 48h(P<0.05). At 7days after treatment, IL-4 levels were reduced in Pain group(P<0.05).
Conclusion: Exercise and tDCS trigger antinociceptive effect in NP model in rats, and this effect can involve modulations in the BDNF and IL-4 levels in the spinal cord.
Keywords: *exercise, tDCS, chronic pain*
Funding: CNPq, CAPES, FIPE-HCPA, FAPERGS

A6

Pain catastrophizing thought modulated by low dose naltrexone (LDN) in fibromyalgia women

Tânia Maria Hendges de Paula, Mariane Schäffer Castro, Liciane Fernandes Medeiros, Wolnei Caumo, Andressa de Souza. ISBN: 978-1-7342025-1-9
Laboratory of Pain & Neuromodulation at Federal University of Rio Grande do Sul

Objective: To evaluate the effects of low dose naltrexone upon pain catastrophism in women with fibromyalgia.
Methods: This is a randomized controlled trial (CAAE 0005317.5.0000.5307). 86 female patients aged 18 to 65 years were included according to the American College of Rheumatology (ACR) criteria. In addition, 48 patients were excluded or dropped out of the study. Patients were randomized between low doses of naltrexone (LDN) (n = 43) or placebo (n = 43). Each patient received 26 days of treatment. During the 1st and 26th day of intervention the patients did the Catastrophic Pain Thinking Scale (B-PCS), divided into rumination, magnification and hopelessness. Data were analyzed using SPSS 20.0, using t test for independent samples, with significant difference when P <0.05.

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