

P 3477**Hyperalgesia is prevented by transcranial direct current stimulation (tDCS) in rats subjected to model chronic stress**

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Objective: Chronic stress has been related with decreased pain thresholds and hyperalgesia. Additionally, transcranial direct current stimulation (tDCS) induces cortical excitability and has been suggested as a treatment for pain. This study aimed test whether tDCS can reverse the specific behavioral effects of chronic stress in the pain system. We evaluated also BDNF and IL10 levels. **Methods:** 24 male Wistar rats were divided in 4 groups: control-TC; chronic stress-S; chronic stress + sham tDCS-SSham and chronic stress + tDCS- StDCS. The animals were exposed to 20-min sessions of 500 µA anodal tDCS, and 30-sec of sham procedure for 8 days before exposure to chronic stress. Chronic stress consisted of 1h per day/5 days on week /11 weeks. After 11 weeks the Hot Plate-HP and Tail-Flick-TF test were done to assess hyperalgesia, and were evaluated the serum levels of BDNF and IL-10. Statistical analysis was performed by One-Way (ANOVA/SNK, $p < 0.05$). Project was approved by Ethics Committee of CEUA/HCPA: 11-0544. **Results:** The HP final test showed differences ($p < 0.001$), and the tDCS group increased the latency in relation S and Sham groups suggesting reversal of hyperalgesia. TF latency showed decreased in groups that received chronic stress when compared to control ($p < 0.001$). Both, BDNF and IL-10 serum levels not showed significant differences between groups ($p > 0.05$). **Conclusion:** The chronic stress led to decreased of nociception threshold shown by HP test, suggesting hyperalgesia and this parameter was prevented by tDCS on TF test. Nonetheless, the chronic stress not affected the BDNF or IL-10 serum levels. **Keywords:** tDCS; hyperalgesia; chronic stress. Projeto 11-0455. Financial Support: FIPE/GPPG-HCPA, CNPq, CAPES.