Effects of Electroacupuncture on Oxidative Parameters in Peripheral Tissues of Wistar Rats

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Electroacupuncture (EA) is an alternative therapy for various diseases, but their mechanisms of action are not clearly elucidated. Some evidences suggest modulation of blood antioxidant enzymes in patients treated by EA. In this work, we evaluated the oxidative profile in different tissues of rats treated or not with EA. Rats were treated during 8 weeks (3 days / week) with EA (20 Hz, 10min) in E36 and VB39 points. After the treatment, control and treated group were sacrificed and biological samples (heart, liver, kidney, muscle, and blood/serum) were collected to further analysis. Catalase (CAT) and superoxide dismutase (SOD) activities, lipid peroxidation, carbonyl and sulfhydryl protein contents were measured. Statistical analysis was performed by Student’s t test (P≤0.05). Ours results demonstrate that EA significantly increase the antioxidant enzymes (CAT and SOD) and the content of reduced sulfhydryl groups, and decrease the lipid peroxidation and carbonyl level in all samples tested when compared to the control group. Our results suggest a beneficial effect for EA treatment in diseases with altered oxidative status.

Keywords: Electroacupuncture; oxidative stress; antioxidant enzymes.
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