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Enalapril Effects on Nitric Oxide Synthase Inhibition-Induced Hypertension: Hemodynamic and Oxidative Stress Evaluations

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***SUMMARY*. This study examined the effects of enalapril treatment on L-NAME-induced hypertensive rats and oxidative profile in the heart. Four experimental groups were established: control (received water for three weeks); L-NAME (600 mg/L in drinking for three weeks); enalapril (20 mg/L in drinking two last weeks); L-NAME + enalapril, treated with L-NAME for one week, and L-NAME plus enalapril in the last two weeks. Arterial blood pressure, lipid peroxidation (TBARS and chemiluminescence–CL), and catalase, superoxide dismutase, glutathione peroxidase, and glutathione-S-transferase activities were evaluated. An increase by 47 % in the arterial blood pressure was observed in L-NAME-treated rats. Hypertension was reduced (9 %) with enalapril. Hypertension increased TBARS (177 %), CL (23 %), and glutathione peroxidase (31 %), this last, reducing by 11 % in L-NAME + enalapril group. Glutathione-S-transferase increased by 46 % in enalapril group. These results suggest that L-NAME administration increased arterial pressure and oxidative stress, indicating glutathione peroxidase as an important antioxidant in this model.**

KEY WORDS: Antioxidant enzymes, Enalapril, Hypertension, Lipid peroxidation, Nitric oxide.

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