



Influence of ACE Inhibitors on the ECG of Acute Renal Hypertension Induced Rats

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SUMMARY. The present study was designed to assess the influence of ACE inhibitors on the electrocardiograph of acute renal hypertensive rats. Acute Renal Hypertension (ARH) was induced in healthy Wistar male rats by clamping/occluding the left renal artery for 4 h. The ECG of the control (normotensive), sham-Operated, hypertensive and ARH Induced rats, treated with ramipril (2.5 mg/kg b.w. p.o) and captopril (4 mg/kg b.w. p.o.) were recorded using the computerized ECG recording system (NIVIQUIRE). The RR intervals in hypertensive rats were increased significantly when compared to control group. Ramipril increased the RR interval significantly ($P < 0.001$). However, captopril did not show statistically significant decrease in RR interval. The amplitude of the QRS complex in the hypertensive group was increased when compared to control group. There was a significant decrease in the amplitude of the QRS complex with ramipril and captopril ($P < 0.001$) treated ARH rats, when compared with hypertensive group. Blockade of the RAAS system is highly effective in preventing both hypertension and changes in the generation of impulse in the pacemaker and its conduction of the cardiac impulses, which is attributed by the deflections of ECG: P, QRS and T waves.

KEY WORDS: ACE Inhibitors, Acute renal hypertension, Electrocardiography, QRS complex, RR interval.

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