

Effects of Acute Exposure to WIFI Signals (2,45 GHz) on Heart Variability and Blood Pressure in Albinos Rabbit

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Abstract : Electrocardiogram and arterial pressure measurements were studied under acute exposures to WIFI (2.45 GHz) during one hour in adult male rabbits. Antennas of WIFI were placed at 25 cm at the right side near the heart. Acute exposure of rabbits to WIFI increased heart frequency (+ 22%) and arterial blood pressure (+14%). Moreover, analysis of ECG revealed that WIFI induced a combined increase of PR and QT intervals. By contrast, the same exposure failed to alter the maximum amplitude and P waves. After intravenously injection of dopamine (0.50 ml/kg) and epinephrine (0.50ml/kg) under acute exposure to RF we found that WIFI alter catecholamines(dopamine, epinephrine) action on heart variability and blood pressure compared to control. These results suggest for the first time, as far as we know, that exposure to WIFI affect heart rhythm, blood pressure, and catecholamines efficacy on cardiovascular system; indicating that radio frequency can act directly and/or indirectly on the cardiovascular system.

Keywords : heart rate (HR), arterial pressure (PA), electrocardiogram (ECG), the efficacy of catecholamines, dopamine, epinephrine

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