

The Study of Hypotensive Effectiveness of Scopoletin on Different Models of Hypertension

ABSTRACTS

A study of the blood pressure lowering effect of scopoletin on different models hypertensive rats has been carried out. Two models of hypertension: Prednisone –NaCl (PN) and Prednisone-NaCl-L-Name (PNL) induced hypertensive rats were used. Each group was divided into 3 subgroups: Subgroup1 of each group were hypertensive rats which treated with saline, subgroup 2 and 3 were treated with scopoletin 10 mg and tempol 17.2 mg/Kg (as comparison) respectively. The systolic blood pressure (SBP), diastolic blood pressure (DBP), mean arterial blood pressure (MAP) and heart rate (HR) were measured directly via carotid artery of anesthetized (Propofol 150 mg/Kg) rats before and every half an hour for two hours after drug commanement. The data were analysed using three ways ANOVA followed by Tukey's HSD and presented as the percentage change \pm SEM. The significance level was taken at $p < 0.05$. Results showed that scopoletin in the dose of 10 mg/kg reduced the SBP, DBP, and MAP of the rats significantly ($p < 0.05$) without any significant change ($p > 0.1$) in the heart rate compared to that showed by control animals for both models of hypertension. The effect of scopoletin was greater than tempol. In addition, the PNL model of hypertension showed greater response in blood pressure reduction compared to that of PN model of hypertension ($p < 0.0001$). These indicate that scopoletin is effective as candidate of blood pressure lowering agent especially on the oxidative stress associated-hypertensive rats.

Keywords: Blood pressure lowering agent, Hypertension, Scopoletin, PN model of hypertension, PNL model of hypertension, Oxidative stress.

