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Blood pressure lowering effect of scopoletin on oxidative stress associated hypertensive rats

Armenia Nazar, Rahmat Hidayat, Meiliani and Yori Yuliandra University of Andalas, Indonesia

A blood pressure lowering effect of scopoletin on anesthetized oxidative stress associated hypertensive rats has been studied. Scopoletin (10 mg/kg BW) was given to the prednison-NaCl (PN) and prednison-NaCl-L-NAME (PNL) induced rats. As comparisons, other groups of the same rats were treated with Tempol (17.2mg/kgBW) and saline. The direct animal carotid artery SBP, DBP, MAP and HR were measured (Biopac Acquisition System MP150) before and every half an hour for two hours after drug commencement. Plasma NO was measured before and at the end of the experiment. Data of BPs and HR were analyzed using three-way ANOVA, while plasma NO was analyzed by two-way ANOVA followed by Tukey's HSD-test (significance was taken at p<0.05). Results showed that the animals SBP, DBP, and the MAP were significantly (p<0.05) reduced by scopoletin and tempol without any significant changed (p>0.1) in the animal HR. The response of PNL hypertensive animals to scopoletin was greater and so the effect of scopoletin compare to tempol. Plasma NO of scopoletin and tempol treated rats also increased, but there was no significant different of average plasma NO between both hypertensive types. These indicated that scopoletin at the given dose is effective as blood pressure lowering agent, especially on the stress oxidative associated hypertensive rats.

Biography

Armenia Nazar is currently working as Professor at Department of Pharmacy, University of Andalas, Indonesia. She has completed her Doctorate in Physiology and Pharmacology at University of Science, Malaysia. She gave her presentations in many international conferences. She is the Vice Dean for the Cooperation and Students Affairs.

armeniaua09@yahoo.com

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