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GIJJA SUWAN : HYPOTENSIVE EFFECTS OF BARAKOL EXTRACTED FROM LEAVES OF Cassia siames Lam. IN RATS AND CATS. THESIS ADVISOR : ASSOC. PROF. RATREE SUDSUANG, Ph.D., THESIS CO-ADVISOR : ASSOC.PROF. PRASAN DHUMMA-UPAKORN, Ph.D. 84 PP. ISBN 974-581-687-2

Hypotensive effects of barakol extracted from leaves of Cassia siamea Lam. were investigated anesthetized in rats and cats. It was found that an intravenous injection of barakol 0.5 - 15 mg/kg body weight caused significantly dose dependent hypotensive effect in both systolic and diastolic blood pressure in rats and cats ($P < 0.05$). In cats, barakol 10 and 15 mg/kg body weight demonstrated significantly and increase in heart rate ($P < 0.05$), without any changes in rats. Furthermore, atropine 0.3 mg/kg body weight showed a significantly reduction in hypotentive effects of barakol 10 mg/kg in cats, whereas in both rats and cats, hexamethonium 3.5 mg/kg body weight decreased slightly. In vitro study, barakol (10^{-5} - 10^{-3} M) produced a significantly reduction on the contraction of isolated rat thoracic aorta induced by phenylephrine 10^{-4}M ($P < 0.05$). Additionally, it was found that barakol induced a decrease in the contraction of isolated thoracic aorta in intact endothelium more than in absent preparation significantly. Atropine 10^{-6}M cannot inhibit the effects of barakol on a reduction in the contraction of thoracic aorta in intact endothelium, but it can inhibit in absent one. The present study suggests that hypotensive effects of barakol in rats and cats may summarily due to the peripheral vasodilation. In rats, the possible mechanisms probably mediate via endothelium derived relaxing factor (EDRF) and/or, acts directly on vascular smooth muscle, while in cats, it may mediate via muscarinic receptors.