

Hypotensive effect of *Cardiospermum halicacabum* Linn. in Anesthetized Rats

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Abstract : In traditional medicine *Cardiospermum halicacabum* L. (Sapindeaceae) is used against various ailments. In current investigation searching a new remedy that will available easily, non expensive, able to lower hypertension and standardize blood pressure, made us to develop an herbal medicine. Crude ethanol extract of *C. halicacabum* and its various fractions ethyl acetate and butanol showed a dose-dependent hypotensive effect in anaesthetized rats. The trachea was exposed and freed from connective tissue and incubated by cannula to facilitate spontaneous respiration. The right carotid artery and left jugular vein were cannulated with polyethylene tubing PE-50 for monitoring blood pressure changes via pressure transducer (Gould P23 ID) connected to a Grass model 79D polygraph and for i.v. injection, respectively. Drugs or the plant extracts were administered at a constant volume of 0.5 ml/kg, followed by injection of 0.2 ml of saline that flushed the cannula. Systolic, diastolic and mean arterial blood pressure (MABP) was measured in mm Hg and heart rate in beats/min. Ethanol extract of *C. halicacabum* showed a significant activity at 50 mg/kg dose. Ethyl acetate fraction (10, 20, 30, 40, and 50 mg/kg) induced dose dependent fall in systolic and diastolic blood pressure, heart rate of rats. At 10-30 mg/kg the hypotensive effect was non significantly reduced by 10 -15%. However, the extract at 40 mg/kg induced significant hypotensive effect calculated as $30.95 \pm 3.2\%$ MABP and this effect persists till 50 mg/kg. The higher polar fraction (butanol) of the whole plant failed to produce any significant response against MABP at all the tested doses (10-50 mg/kg). *C. halicacabum* lowers blood pressure, exerts a dose-dependent hypotensive effect, can be used as hypotensor.

Keywords : *cardiospermum halicacabum*, calcium channel blocker, hypotensive, various extracts

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