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Antihypertensive and heart rate reduction effect of gambir leaves extract (*Uncaria gambir* (H.) Roxb) in NaCl induced-hypertensive rats

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Statement of the Problem: Hypertension represents a significant global health burden due to its high prevalence and complications. Herbal products with confirmed clinical efficacy and safety would provide benefit to global hypertension treatment. One example of such products is catechin which is found in gambir leaves (*Uncaria gambir* (H.) Roxb). In this study, we investigated the antihypertensive and heart rate reduction effects of gambir leaves extract in hypertensive rats.

Methodology & Theoretical Orientation: Thirty-six male rats strain Sprague-Dawley were divided into six groups consisting of normal control, negative control, atenolol (13.5 mg/kg body weight [BW]) and three dose groups (200, 400, and 800 mg/kg bw). All groups except the normal group were induced with saline for two weeks. This was then followed by treatments for one week. Blood pressure and heart rate were measured on third and fourth week using noninvasive tail blood pressure system and electrocardiogram, respectively. We found that gambir leaves extract at doses of 400 and 800 mg/kg bw after two weeks could reduce blood pressure significantly ($p < 0.05$) compared to the normal group. Moreover, the 800 mg/kg bw dose extract was also able to reduce heart rate.

Conclusion & Significance: Our studies indicate that gambir leaves extract can reduce blood pressure and heart rate, possibly due to catechin effect as a non-specific angiotensin converting enzyme (ACE) inhibitor.

Biography

Tika Nurhasanah has been working as the Medical Scientific Liaison in a multinational pharmaceutical company since two years. Currently, she is pursuing her Post-graduation from the Institute of Cardiovascular and Medical Sciences, University of Glasgow. She has experience in Clinical Trials, Medical Information, and at various pharmaceutical industries.

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