



## RESEARCH ARTICLE

# Effects of Extracts and Fractions of *Gynura procumbens* on Rat Atrial Contraction

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Available online Feb 12, 2013

Received: Jun 2, 2012  
Revised: Oct 24, 2012  
Accepted: Oct 31, 2012

## KEYWORDS

*Gynura procumbens*;  
inotropic activity;  
rat;  
atrial contraction;  
hypertension

## Abstract

There is currently a great deal of research interest in utilizing plant compounds against human diseases, including hypertension. The present study investigated the effects of different extracts and fractions from leaves of *Gynura procumbens* Merr. on rat atrial contraction in vitro. Isolated left and right atria, mounted in a 20-ml organ bath, were allowed to equilibrate for 15 min before the application of the extracts or fractions. The extracts (petroleum-ether extract (PE) and methanol extract (ME)) and the fractions (chloroform fraction (CHL), ethyl-acetate fraction (EA), n-butanol fraction (NB) and water fraction (WA) of the methanol extract) were tested at three concentrations (0.25, 0.5 and 1.0 mg/ml), with a  $\beta$ -adrenergic agonist (isoprenaline) as a control. All data on contraction responses were log-transformed and analyzed. When exposed to the different extracts, both atria tended to exhibit greater contractive responses with the NB whereas cardiac contractions had a tendency to be reduced with most other extracts. For a given extract, the contraction responses were particularly greater at 0.5 mg/ml for the right atrium and at 1 mg/ml for the left atrium. Further analysis focusing on the NB fraction revealed that positive inotropism was greater in left atria exposed to highly-concentrated F2 and F3 sub-fractions. Taken together, our results suggest that NB extracts and fractions from the *G. procumbens*-leaf methanol extract have positive inotropic activities and, hence, can be considered as an alternative/traditional medicine against increased blood pressure in humans or can be used in strategies aimed at finding antihypertensive biomolecules from an accessible source.

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