

The Effect of *Tinospora crispa* Extracts on the Contraction of Isolated Atrium and Aorta of Rats

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ABSTRACT

In the present study, the cardiovascular effect of Tinospora crispa extracts on the isolated paced left atrium, spontaneously beating right atrium and the descending aorta of rats were studied. The stems of T. crispa were serially extracted with petroleum ether, followed by chloroform, methanol and lastly water. The chloroform extract caused the strongest inhibition on the inotropic effect of isoprenaline (ISP) to the left atrium. The inhibition was non-competitive since the maximum of the log dose-response curve of the atrium to ISP was reduced. However, none of the extracts (0.2 – 1.0 mg/mL) significantly influenced the inotropic activity of the right atrium to ISP. All the extracts studied also non-competetively inhibited the noradrenaline (NA)-induced rat aortic strips contraction and the chloroform extract was again found to be the most potent extract. The chloroform extract was therefore fractionated and the effect of the fractions on the NA-induced rat aortic strips contraction was examined. CF3 fraction was found to be the most active fraction and was further fractionated. The fractions were tested again on the NA-induced rat aortic strips contraction. However, all fractions showed almost the same effect where 0.50 mg/mL fractions reduced the maximum response by about 60-80%.

Keywords: *Tinospora crispa*, left atrium, right atrium, aorta, anti-hypertensive, isoprenaline, noradrenaline

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