Evaluation of *In vivo* assay for anti – histamine activity of *Munronia pinnata*

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Abstract

Munronia pinnata (MP) is a highly demanded herb in folklore medicine of Sri Lanka. *In-vitro* propagation is being attempted to meet the increasing demand of this plant. This plant is the major ingredient of the decoctions and powders used for the treatment of fever and upper respiratory tract inflammations as a substitute for *Swertia chirata* (Gentianaceae) which is named as *kirāta* or *kirāta thikta* in Sanskrit. This study was designed to evaluate and compare the anti- histamine effect of aqueous extracts of natural plant (MPaq) and calli (MPCaq) of *M. pinnata* in Wistar rat model. We used the conventional method of decoction preparation according to Ayurveda Pharmacopeia (the reduction of eight volumes to one) to prepare the aqueous extracts of natural plant (MPaq) and calli (MPCaq) of *M. pinnata.* Rats were randomly divided in to four groups (n=6). Group I and II were treated with the equal dose (2.0 g/kg) of MPaq, MPCaq. Chlrorpheniramine (0.67mg/kg) as a reference drug was administered orally for group III (positive control group) and 1.0 mL of DW was given to negative control group. After 1 hour, 50 µl of 200 µg/mL histamine dihydrochloride was subcutaneously injected to the skin where the fur had been shaved in each animal. After two minutes, the area of wheal appeared in the shaved area was measured. The aquoeus extract of MP was exhibited a significant ($p < 0.05$) reduction (51.48%) of the area of wheal formed by the subcutaneous injection of histamine. The highest reduction (57.97%) was recorded from the reference drug, chlorpheniramine. This relrults revealed the the selected dose of MP poseses an anti histamine activity which is comparable to the refernce drug. Moreover, these findings suggest that the calli of *M. pinnata* also have good prospects for futher study to apply In vitro propagation techniques to meet the increasing demand of this plant.

Keywords: *Munronia pinnata,* folklore medicine, anti- histamine effect, aqueous extracts, *In-vitro* propagation

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