EVALUATION OF INHIBITION OF PROSTAGLANDIN E_2 LEVEL BY *Psychotria sarmetosa* LEAVES USED IN TRADITIONAL PORRIDGE IN SRI LANKA

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Prostaglandin E_2 (PGE_2) is a mediator associated with physiological and pathological conditions. Although it has various physiological roles at normal level, alterations in PGE_2 are associated with pathological conditions such as inflammatory diseases. *Psychotria sarmentosa* ("Gonica" in Sinhala) leaves are consumed in the form of a traditional porridge. Indigenous healers prescribe an aqueous extract of these leaves for individuals who have been physically assaulted, indicating that it may possess potent analgesic and/or anti-inflammatory activity. Our previous studies have also shown that aqueous extract of these leaves has significant anti-inflammatory activity in rats. As PGE_2 is an inflammatory marker, an attempt has been made to evaluate inhibition of PGE_2 level on adjuvant-induced arthritis rat model, in the present study. Healthy adult male Wistar rats (150-200 g) were used for the experiment (n=6/group). The negative and positive control groups were orally administered with 1.0 ml of distilled water and celecoxib (20 mg/kg b.w.) respectively. The test group received a dose of 100 mg/kg b.w.of aqueous extract of *P. sarmentosa* leaves (AEPL) which was found to be the most effective dose during the studies on acute anti-inflammatory activity. The oral treatments were started on day 14 and continued to day 28. This results showed that the treatment with 100 mg/kg b.w.of AEPL significantly ($p \leq 0.05$) inhibited the PGE_2 level as compared to the negative control. It was 436±85 pg/l in AEPL group whereasit was 792±158 pg/l for negative control. The PGE_2 level for celecoxib treated group was 294±54 pg/l. Hence, the present study has demonstrated that the aqueous extract of *P. sarmentosa* leaves has PGE_2 inhibitory activity which may be contributing to its anti-inflammatory effect and it justifies the traditional use of this plant in the treatment of various types of inflammation.

Keywords: *Psychotria sarmentosa*, Inflammation, Prostaglandin E_2