



Research Article

EFFECT OF ETHYL ACETATE SOLUBLE PROANTHOCYANIDINS FROM *COCOS NUCIFERA* L. INFLORESCENCE ON PROGESTERONE AND OESTROGEN LEVELS IN FEMALE RATS

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ABSTRACT

The immature inflorescence of *Cocos nucifera* L. variety aurantiaca is used by Ayurvedic and traditional medical practitioners for the treatment of menorrhagia in Sri Lanka. We have previously reported the extraction, purification and characterization of ethyl acetate soluble proanthocyanidins (EASPA) in the inflorescence of *Cocos nucifera* L. EASPA obtained from immature *Cocos nucifera* L. (var. aurantiaca) inflorescence was evaluated for its effect on the reproductive hormonal levels of female rats. EASPA (0.33 mg/day) dissolved in water was administered orally to female rats for 28 consecutive days. At the end of the study period, oestrogen and progesterone levels were measured and compared with the control group (water). Statistical analysis was performed with one-way ANOVA, followed by student T test using Minitab 17.0 software. The length of the reproductive cycle was 4.44 ± 0.15 days and 4.56 ± 0.15 days for the control and test group rats, respectively. No significant changes were noticed in the length of the cycle nor were there any difference in vaginal cytology in test and control group rats. There was no significant difference in the estrogen level between control and test group animals. However, there was a highly significant increase in progesterone levels of the test group as compared to the control ($P \leq 0.001$). This result suggests a possible mode of action to explain the use of coconut inflorescence in controlling menorrhagia in traditional medicine in Sri Lanka.

KEYWORDS: *Cocos nucifera* inflorescence, menorrhagia, proanthocyanidins, progesterone.