

Effect of Mukkudu Maathrai (Korosanai) Treatment on Serum Prolactin Secretion in Rats

Kanisra Mary. F¹, Eswaramohan. T¹, Muruganandan. A², Romakeswaran. P³

¹Department of Zoology, University of Jaffna, Sri Lanka.

²Department of Pathology, University of Jaffna, Sri Lanka.

³Indigenous Medicine, N.E.P.C, Sri Lanka.

The Mukkudu Maathrai (Korosanai) is an indigenous medicine which is a mixture of kasthuri, saffron and bile granules of cow in 1:2:3 ratios respectively. It has been prescribed to six month old babies and to adults by Ayurvedic doctors in Jaffna Peninsula. Since ancient period it has been believed by the practitioners that the above mixture causes a strong effect on hypothalamo-pituitary axis. The prolactin (Prl) is secreted by the pituitary gland and is reported to have over 300 separate biological activities. But so far no studies have examined the possible effect of korosanai on serum prolactin secretion. Thus the present study was undertaken to elucidate the effect of korosanai treatment on serum prolactin secretion in rats.

Male rats (*Rattus norvegicus*, 3-4 months old, weight 120 ± 10 g) bred and maintained under uniform conditions were fed orally with the korosanai mixture (1% w/v) in a time dependent manner and the controls were with the distilled water alone. Blood sample was collected every 2 days by tail bleeding and serum Prl levels were measured using rat prolactin enzymeimmunoassay. All experiments were conducted in duplicates. Statistical analyses were performed using Prism 2.01. Geometric mean \pm SEM was used to describe data. Repeated measures analysis of variance (ANOVA) with Dunnett's post test for multiple comparisons was used on log transformed data to detect the effect of korosanai and duration of treatment.

When korosanai was used at 1% w/v daily for 6 days, prolactin secretion increased progressively in a time dependent manner and the Prl concentrations significantly increased after 4 days and 6 days of treatment (geometric mean (+/- SEM) pretreatment : 4.543 (1.080 – 1.056) ng/ml, after 2 days: 6.490 (1.488 – 1.324) ng/ml ANOVA $P > 0.05$, after 4 days: 9.429 (1.356 – 1.240) ng/ml ANOVA $P < 0.05$, after 6 days: 9.792 (1.059 – 1.041) ng/ml ANOVA $P < 0.05$). Thus korosanai appears to be regulator of serum prolactin secretion at the duration used in the present study.

Key words: Prolactin, *Rattus norvegicus*, saffron, kasthuri.