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OP 4 - A COMPARATIVE STUDY ON ANTI-INFLAMMATORY ACTIVITY OF *Rasnasapthakaya* DECOCTION WITH AND WITHOUT DRIED GINGER POWDER IN WISTAR RATS

R. Sanjeev¹, T S. Suresh² and J. Dahanayake³

¹ Department of Human Biology, Faculty of Health-Care Sciences, Eastern University, Sri Lanka

² Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

³ Institute of Indigenous Medicine, University of Colombo, Sri Lanka

Introduction and Objectives: Globally, populations are aging at a rapid rate and the elderly citizens are burdened with chronic debilitating diseases such as arthritis, non-articular rheumatism, spondylosis, arthralgia, frozen shoulder, fibrositis, gout, neuralgia, etc. *Rasnasapthakaya* (RS) decoction is a well-known herbal formulation, which is used to treat chronic arthritic conditions in Ayurvedic medicine. RS decoction is a potent anti-inflammatory drug, which is prepared by seven herbal ingredients such as *Alpinia calcarata*, *Tinospora cordifolia*, *Cassia fistula*, *Boerhavia diffusa*, *Cedrus deodara*, *Ricinus communis* and *Tribulus terrestris*. According to the literature, the decoction is being given with dried ginger powder as a vehicle. However, in most of the Ayurvedha hospitals in Sri Lanka, the decoction is being given without ginger powder. Therefore, the aim of this study was to compare the anti-inflammatory activity of the decoction with and without dried ginger powder in Wistar rats using carrageenan induced paw oedema model. The animal experiment was approved by the Ethics Review Committee of Faculty of Medical Sciences, University of Sri Jayewardenepura (Approval number 693/12).

Methodology: Healthy male Wistar rats were randomly assigned into 4 groups (n=6 in each group) as Group I (negative control-water-2.5ml), Group II (Indomethacin- 10mg/kg), Group III (*RS decoction with ginger powder- 40mg/kg*) and Group IV (*RS decoction without ginger powder*). For this study, the RS decoction was freshly prepared according to the Ayurvedha conventional method. The paw oedema was induced by injecting 1% of 0.1ml carrageenan to all the groups after one hour of the oral treatments. The paw volumes were measured by digital plethysmometer at 1st, 2nd, 3rd, 4th and 5th hours.

Results: The maximum inhibition, 90.9 % was noted at 5th hour of administration in the Group III, whereas the Group II and IV produced 72.3% of maximum inhibition ($p < 0.05$). In the Group III, statistically significant reductions in oedema formation ($p < 0.05$) were noted in every hour.

Conclusion: The results of the present study demonstrate that the *Rasnasapthakaya* decoction with dried ginger powder has more potent anti-inflammatory effect than the decoction without ginger in Wistar rats.

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Key words: *Rasnasapthakaya* decoction, ginger powder, anti-inflammatory activity