

CHRONIC ANTI-INFLAMMATORY ACTIVITY OF *Rasna saphthakaya* DECOCTION WITH AND WITHOUT DRIED GINGER POWDER IN ADJUVANT INDUCED ARTHRITIC RATS

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The *Rasna saphthakaya* (RS) decoction is a potent anti-inflammatory poly-herbal drug, which is used in Ayurveda to treat chronic arthritic conditions, especially rheumatoid arthritis. Adjuvant induced arthritis (AIA) in rats is a model of chronic inflammatory diseases, induced by heat-killed cells of *Mycobacterium butyricum*. The study investigates chronic anti-inflammatory effects of *Rasna Saphthakaya* decoction with and without dried ginger powder in adjuvant induced arthritic rats. Healthy Wistar male rats were divided into five groups (n=6): healthy control (Gr. I), arthritic control (Gr. II), celecoxib (Gr. III – 5mg/kg), *Rasna saphthakaya* decoction (100 mg / kg) with (Gr. IV) and without dried ginger powder (Gr. V). Arthritis was induced by single intradermal injection of 0.1 ml of Freund's Complete Adjuvant (FCA) containing 0.05% w/v *Mycobacterium butyricum* suspension into footpad of left hind paw of all rats except Group I. The *Rasna saphthakaya* decoction was prepared freshly as per standard Ayurveda method. Prophylactic treatment regimen was followed from Day 1 to 19. Body weight, hind paw volume & ankle joint thickness was measured on day 0, 4, 8, 11, 15 and 19 after immunization. On day 20, the animals were humanely euthanized and blood samples were collected for complete blood count, serum cyclo-oxygenase (COX 2), C reactive protein (CRP) and malondialdehyde (MDA) analysis. Findings elucidated that both decoctions tested significantly (p<0.05) reduced paw oedema, improved body weight and joint integrity. In addition, the decoctions brought about significant changes in (p < 0.001) altered blood parameters associated with arthritis and reduced the elevated serum COX-2, CRP and MDA level. Hence the study provides the evidence of potent chronic anti-inflammatory effect of *Rasna saphthakaya* decoction and the activity of both the decoctions are comparable.

Keywords: Rheumatoid Arthritis, *Rasna saphthakaya* Decoction and Adjuvant Induced Arthritis