

3rd International Conference and Expo on

Natural, Traditional & Alternative Medicine

September 24-25, 2018 | Montreal, Canada

Evaluation of anti-inflammatory activity of Shothari rasa (ayurvedic formulation): An experimental study

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The Anti-inflammatory activity of Shothari rasa, an Ayurvedic formulation, was performed on albino rats of Carrageenan induced model. 20 healthy albino rats were selected randomly and divided into five groups, each group containing four rats were administered orally at the dosage levels. The inflammatory reaction is readily produced in rats in the form of paw edema with the help of irritants. Carrageenan-induced paw oedema is the most commonly used method in experimental pharmacology. Here the rats of treated Group II, III, IV, and V were administered orally with Ibuprofen soln, Shothari Rasa 125mg/kgbody wt, Shothari Rasa 250mg/kg body wt, Shothari Rasa 500mg/kgbody wt, respectively one hour before injecting 1% w/v suspension of carrageenan (0.1 ml) into the subplantar region of left hind paw of all the five groups. Paw volume of all 20 rats was measured soon after injecting carrageenan. The volume was again measured after 1, 2, 3, 4 & 24 hrs in all the five groups of rats. The change in paw volume of Group I was compared with Group II, III, IV & V Group. Also, the treated Group II, III, IV, V were also compared in between and expressed as percentage oedema inhibition by the drug. Results of the present study are based on the oedema of the hind paw of rats of all five groups measured after 1hr, 2hrs, 3hrs, 4hrs, and 24hrs after carrageenan injection. After one hr of carrageenin Inj Both Trial group Shothari rasa 125mg/Kg and Shothari rasa 250mg/Kg have equal percent inhibition of oedema as with Standard group (Ibuprofen) that is 42.2% while last group (Shothari rasa 500mg/kg) has higher percent inhibition of oedema (50%) than standard (Ibuprofen) (42.2%). After two hrs of carrageenin inj there is increase in Percent inhibition of oedema with an increase in dosage of trial drug that is Shothari rasa 125 mg/Kg has 27.19%, Shothari rasa 250 mg/Kg has 31.49% and Shothari rasa 500mg/kg has 56.69% inhibition higher than Standard (Ibuprofen) 47.24%. After three hrs of Carrageenin inj there is increase in Percent inhibition of oedema with an increase in dosage of trial drug that is Shothari rasa 125 mg/Kg has 20%, Shothari rasa 250 mg/Kg has 21.42% and Shothari rasa 500mg/kg has 41.42% inhibition higher than Standard (Ibuprofen) 39.28%. After four hrs of Carrageenin inj there is again increase in Percent inhibition of oedema with an increase in dosage of trial drug that is Shothari rasa 125 mg/Kg has 25.38%, Shothari rasa 250 mg/Kg has 29.22% and Shothari rasa 500mg/kg has 40.76% inhibition higher than Standard (Ibuprofen) 38.46%. After twenty-four hrs of carrageenin inj there is again increase in Percent inhibition of oedema with an increase in dosage of trial drug that is Shothari rasa 125 mg/Kg has 3.22%, Shothari rasa 250 mg/Kg has 19.35% and Shothari rasa 500mg/kg has 27.41% inhibition again higher than Standard (Ibuprofen) 3.22%. The maximum activity of all trial Groups was observed during first and second hr. and the results are significant ($P < 0.005$) and are comparable to standard Ibuprofen. Highest percentage oedema Inhibition was seen after 1 & 2 hrs. Summarizing the above it is concluded that Shothari rasa has shown its extreme utility or significance on the inflammation probably because of its excellent activity of inhibiting the both early released and late released mediators which are rarely seen in any anti-inflammatory formulation.

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