

8th International Conference and Exhibition on

TRADITIONAL & ALTERNATIVE MEDICINE

November 08-09, 2018 Auckland, New Zealand

Evaluation of anti-inflammatory activity of Trikatu (ayurvedic formulation): An experimental study**Amnish Verma**

Ministry of AYUSH-Government of India, India

The anti-inflammatory activity of Panchkatu, an Ayurvedic formulation was performed on albino rats of Carrageenan induced model. Twenty healthy albino rats were selected randomly and divided in to five groups, each group containing four rats were administered orally at the dosage levels as Group I (Control) [Saline water, 1 ml/100 gm body wt.], Group II (Standard) [Ibuprofen solution, 100 mg/Kg body wt.], Group III (Trial) [Panchkatu, 125 mg/Kg body wt], Group IV (Trial) [Panchkatu, 250 mg/Kg body wt [250 mg/Kg body wt] and Group V (Trial) [Panchkatu, 500 mg/Kg body wt]. The inflammatory reaction is readily produced in rats in the form of paw edema with the help of irritants. Carrageenan induced paw edema is most commonly used method in experimental pharmacology. The rats of treated Group II, III, IV and V were administered orally with Ibuprofen solution, Panchkatu 125 mg/Kg body wt., Panchkatu 250 mg/Kg body wt., Panchkatu 500 mg/Kg body wt., respectively one hour before injecting 1% w/v suspension of carrageenan (0.1 ml) into the sub plantar region of left hind paw of all the five groups. Paw volume of all 20 rats were measured soon after injecting carrageenan. The volume was again measured after 1, 2, 3, 4 and 24 hours in all the five groups of rats. The change in paw volume of Group I was compared with Group II, III, IV and V Group. Also, the treated Group II, III, IV, V were also compared in between and expressed as percentage edema inhibition by the drug. Results of the present study are based on the edema of hind paw of rats of all five groups measured after 1, 2, 3, 4 and 24 hours after carrageenan injection. After one hour of carrageenan Inj both trial group Panchkatu 125 mg/Kg and Panchkatu 250 mg/Kg have equal percent inhibition of edema as with Standard group (Ibuprofen) that is 42.2% while last group (Panchkatu 500 mg/kg) has higher percent inhibition of edema (50 %) than standard (Ibuprofen) (42.2%). After two hours. of carrageenan inj there is increase in percent inhibition of edema with increase in dosage of trial drug that is Panchkatu 125 mg/Kg has 27.19%, Panchkatu 250 mg/Kg has 31.49% and Panchkatu 500 mg/kg has 56.69% inhibition higher than Standard (Ibuprofen) 47.24%. After three hours of Carrageenan inj there is increase in percent inhibition of edema with increase in dosage of trial drug that is Panchkatu 125 mg/Kg has 20%, Panchkatu 250 mg/Kg has 21.42% and Panchkatu 500 mg/kg has 41.42% inhibition higher than Standard (Ibuprofen) 39.28%. After four hours of Carrageenan inj there is again increase in percent inhibition of edema with increase in dosage of trial drug that is Panchkatu 125 mg/Kg has 25.38%, Panchkatu 250 mg/Kg has 29.22% and Panchkatu 500 mg/kg has 40.76% inhibition higher than Standard (Ibuprofen) 38.46%. After 24 hours of carrageenan inj there is again increase in percent inhibition of edema with increase in dosage of trial drug that is Panchkatu 125 mg/Kg has 3.22%, Panchkatu 250 mg/Kg has 19.35% and Panchkatu 500 mg/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 hours and the results are significant ($P < 0.005$) and are comparable to standard Ibuprofen. Highest percentage edema Inhibition was seen after one and two hours. Summarizing the above it is concluded that Panchkatu has showed 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.

Biography

Amnish Verma is currently working at Department of AYUSH, Ministry of Health and Family Welfare, Government of India, India. He has published numerous research papers and articles in reputed journals and has various other achievements in the related studies. He has extended his valuable service towards the scientific community with his extensive research work.

amnishv@yahoo.com

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