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ACUTE AND CHRONIC ANTI INFLAMMATORY STUDY OF A SIDDHA MEDICINE "SWASAKUDORI CHOORANAM"

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ABSTRACT

Globally interest in traditional medicine is increasing day by day. At the same time safety and efficacy of traditional medicine have become important concerns for health authorities and the public. In siddha system of medicine Iya eraippu Noi may be correlated with the bronchial asthma in modern medicine. Airway inflammation in the bronchial wall causes bronical asthma. Since "swasakudori chooranam" has anti-inflammatory properties, the drug was taken for study to evaluate the effect on reducing acute and chronic inflammation. On pharmacological evaluation the drug showed moderate acute and chronic anti inflammatory effect. The study methods, observation and the data of the results will be presented and discussed.

KEY WORDS

Swasakudori chooranam, iya eraippu noi, siddha system, anti inflammation.

INTRODUCTION

Inflammation is the complex biological response of vascular tissues to harmful stimuli such as pathogens, damaged cells, or irritants. Inflammation is a protective attempt by the organism to remove the injurious stimuli as well as the healing process for the tissue.

Inflammation can be classified as either acute or chronic. Acute inflammation is the initial response of the body to harmful stimuli and is achieved by the increased movement of plasma and leukocytes from the blood into the injured tissues. A cascade of biochemical events propagates and matures the inflammatory response, involving the local vascular system, the immune system, and various cells within the injured tissue. Prolonged inflammation, known as chronic inflammation, leads to progressive shift in the type of cells which are present at the site of inflammation and is characterized by simultaneous destruction and healing of the tissue from the inflammatory process.

Several experimental models of paw oedema have been described. Carageenan iduced paw oedema is widely used for determinining the acute phase of inflammation.

OBJECTIVE

To evaluate the acute and chronic anti inflammatory action of a siddha medicine "Swasakudori Chooranam" in Albino rats.

MATERIALS AND METHODS

Hind Paw method:

This experiment was a part of project work for post graduation in specialication of siddha pharmacology and which was carried out in Pharmacology laboratory of Govt. Siddha Medical College, Palayamkottai.

Experimental Animals:

12 healthy albino rats weighing 100 to 150 gm were taken and divided in to three groups each consisting of four rats.

Preparation of the test drug:

One gm of Swasakudori Chooranam was taken and mixed with 5 ml of water and 5 ml of honey.

Method:

First group of albino rats were kept as control by administering distilled water orally @ 20 mg/ml/100 gm body weight. Second group was given ibuprofen @ 20 mg/ml/100 gm body weight and kept as standard. The third group received the test drug "Swasakudori Chooranam" @ 100 mg/ml/100 gm body weight. Before administering the test drug the hind paw volume of all rats were measured. This was done by dipping the hind paw up to the tibio tarsal junction in a mercury plethysmograph. While dipping the hind paw by pulling the syringe piston the level of mercury in the centre small tube was made to coincide with red marking and reading was noted from the plethysmograph. Soon after measurement the drugs were administered orally. One hour later subcutaneous injection of 0.1 ml of 1 % (W/V) carageenin in water was made in to plantar surface of both hind paws of each rat. Three hours after carageenin injection the hind paw volume was measured once again. The difference between the initial and final volume was calculated and compared. The values are tabulated.

Name of drug/groups	Dose / 100 gm of body weight	Initial reading (Avg)	Final Reading (Avg)	Mean difference	% of inflammation	% of inhibition	Remarks
Water	20 mg/ ml	0.7	1.6	0.9	100		-
Ibuprofen	20 mg/ml	0.8	0.85	0.5	6. 25	93.75	-
Swasakudori chooranam	100mg/ml	0.7	1.25	0.55	61.1	38.90	Moderate

Cotton pellets granuloma method

This experiment was carried out in Pharmacology laboratory of Govt. Siddha Medical College, Palayamkottai.

Experimental Animals:

9 healthy albino rats weighing 150 to 200 gm were taken and divided in to three groups each consisting of three rats.

Preparation of the test drug:

One gm of Swasakudori Chooranam was dissolved in 10 ml of water. A dose 1 ml was given to each rat. This one ml contains 100 mg of test drug.

Method

Each rat was anaesthetised with ether and cotton pellets were implanted subcutaneously in the groin on each side. From the day of implantation one group of animal received Swasakudori Chooranam in the dose of 100 mg/ml/100 gm body weight. The standard drug of animals received ibuprofen in a dose of 20 mg/ml/100 gm body weight. On the 8th day the rats were sacrificed and the pellets were removed and weighed. Then they were put in an incubator at 60 – 80 ^{0} C and then the weight of the granulation tissue was determined separately. The values are tabulated below.

Name of drug/groups	Dose / 100 gm body weight	Pellet weight	Pellet weight with granuloma	Mean difference	% of inflammation	% of inhibition	Remarks
Swasakudori chooranam	100mg/ml	10 mg	153 mg	-	61	39	Moderate
Ibuprofen	20 mg/ml	10 mg	55 mg	-	22	78	-
water	1 ml	10 mg	250 mg	-	100	-	

RESULTS

Hind paw method

The swasakudori chooranam had moderate acute anti-inflammatory effect.

Cotton pellet granuloma method

The swasakudori chooranam had moderate chronic anti-inflammatory effect.

CONCLUSION

Pharmacological study of swasakudori chooranam revealed moderate acute and chronic anti inflammatory action. By this action the drug reduces the airway inflammation of bronchial wall in bronchial asthma.

REFERENCES

1. Sri C. Kannuchamy pillai.-Kannuchamiyam paramparai vaithiyam, 2006 edition.
2. Josephdas, J. (2006). Lecture notes on Evaluation of drugs in pharmacology.,Government Siddha Medical College, Palayamkottai. Tirunelveli Dist.
3. www.ijppronline.com
4. Davidson's principles and practice of medicine-19th edition.

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