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Anti pyretic, Analgesic and Anti histaminic activity of Kanjankorai chooranam – A poly herbal preparation for children.

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Abstract

To investigate the efficacy of Kanjankorai chooranam in fever, allergy and pain using animal models to support its action. Acute toxicity study of Kanjankorai chooranam was performed in wistar albino rats of eitrher sex to fix the effective dose. The anti pyretic, anti histaminic and analgesic activity was evaluated in brewer's yeast induced pyrexia in rats, dolorimeter induced pain in albino rats and allergy induced guinea pig ileum.

Keywords: Anti pyretic, Analgesic, Anti histaminic, Kanjankorai chooranam.

Introduction

Kabasuram is one of the most common infectious disease in children. Infectious diseases, remains the main cause of morbidity and mortality in children particularly in under developed areas, where it is associated with poverty and overcrowding.

Kabasuram is a disease associated with respiratory tract. Fever, cough, dyspnea and wheezing are predominant symptoms. Infectious illness promotes increased resting energy expenditure and some catabolism dominates over anabolism, mediated by cytokines and other metabolic factors.

Several polyherbal preparation have been mentioned in Siddha literature for Kabasuram. It is well documented that the polyherbal formulation possessing anti pyretic and analgesic activities or vice versa. The Kanjankoraichooranam is a polyherbal formulation used in the treatment of kabasuram. It is a combination of 13 raw drugs in equal proportion like Kanjankorai (*Ocimum alba*. Linn), Thulasiver (*Ocimum sanctum.* Linn), Parpadagam (*Mullugo cerviana.* Linn), Vishnukirandhi (Evlovulusalsinoides. Linn), Nilavembu (Andrographispaniculata. Wall.exNees), Peramutti (*Pavonia odarata*. Willd), Arathai (*Alpinia officinarum*. Linn), Peipudal (*Trichsanthes lobata*. Roxb), Sukku (*Zingibera officinale.* Rosc), Siruthekku (*Clerodendrum serratum*. Linn), Thippili (*Piper longum.* Linn), Vilampisin (*Limonia accidissina*. Linn), seenthil (*Tinospora cordifolia*. Wild).

All these drugs are traditionally used in the treatment of fever, allergy and pain. The present study was undertaken to investigate anti pyretic, analgesic potential and anti histaminic activity in animal models to support its actions.

Anti-pyretic study of Kanjankorai Chooranam

Methodology

Group of six albino rats were selected and divided equally into 3 groups AII the rates were made hyperthermia by subcutaneous injection of 12% suspension of yeast at a dose of 1ml/100 gm of body weight. 10 hours later one group of animals was given the test drug by gastric tube at a dose of 250mg/ml and the second group received only distilled water at a dose of 2ml. Third group received standard drug paracetomol 20mg/ml. Then mean rectal temperature for the 3 group were recorded at 0 hour, 1 ½ hour,3 hour and 4 ½ hour after the drug administration. The difference between the mean temperature of the control group and that of the order group was measured.

Tabulation of result obtained-Kanjankorai Chooranam

Name of the Drug/ Groups	Dose/ 100gram body weight	Initial Temperature in centrigrade	After Drug administration			Average	Remark
			1 ½ Hour	3 Hour	4 ½ Hour		
Control (water)	1ml	36.0 37.0	36.0 37.0	36.0 38.0	36.0 39.0	38.0	-
Standard paracetomol	20 mg	38.0 37.0	37.0 37.0	36.5 36.5	35.0 34.0	34.5	-
Kanjankorai chooram	100 mg	38.0 37.0	38.0 37.0	37.0 36.5	36.0 36.0	36.0	Significant

Inference

Kanjankoraichooranam has significant Anti pyretic action.

Analgesic study on Kanjankorai Chooranam by Talflick method in albino rats

Methodology:

Preparation of the test drug

1 gm ofkanjankorai chooranam was disolved in 100 ml honey, Separately a dose of 2ml was given to each rat. The 2ml contains 200mg of the test drug.

Instruments

Analgesic meter (or) Dolon meter using heated michrome wire as the source of stimulus.

Procedure

Three groups of healthy albino rats of both sexes were selected, each group having 3 rats. Each rat was put inside a rat holder with the tail projecting out fully. The tip of the tail was kept over the michrome wire of the analgesic meter without touching it.

Now the current of 5MA was passed through the analgesic meter to heat the microme wire by switching it on, at the sometime starting a stop watch. The time taken for the rat to flick the tail was noted. This is reaction time.The reaction time is noted for each rat and the average is calculated.

First group was given 2ml of distilled water and kept as control. Second group was administered with paracetamol at a dose of 20mg/ 100gm of body weight orally. The test drug was administered to the third group at a dose of 200mg/100gm of body weight separately.

After the lapse of half an hour and one hour, the reaction time of each rat was noted in each group at an interval of 2 minutes (when a rat fails to flick the tail, it should not be continued beyond 8 seconds to avoid injury) and the average was calculated.

The results of control group, standard group and drug treated group were tabulated and compared.

Tabulation of result obtained-Kanjankorai Chooranam

Name of the Drug/ Groups	Dose/ 100gram body weight	Initial reading	After Drug administration			Mean different	Remarks
			½ Hour (Avg)	1 Hour (Avg)	1 ½ Hour (Avg)		
Control (water)	2ml	2.5 sec	2.5 sec	2.5 sec	2.5 sec	2.5 sec	-
Standard paracetomol	20 mg	2.0 sec	2.5sec	4.5 sec	6.5 sec	6.5 sec	-
Kanjankorai chooram	100 mg	2.5 sec	2.5 sec	4.0 sec	5.0 sec	5.0 sec	Significant

Inference

Kanjankorai Chooranam has significant analgesic action.

Anti-histaminic effect of Kanjankorai Chooranam on isolated guinea pig ileum

Methodology:

Preparation of the test drug

500mg of kanjankoraichooranam, was dissolved in 10ml of water separately and boiled for 15 minutes. The filtrate was used for the experiment.

Solution Required

Histamine - 1 in 1,00,000 strength
Anti Histamine - pheniramine maleate 2.5mg/ml
Test drug - kanjankorai chooranam (50 mg/ml)
Nutrient Solution
Tyrode - 1-2 litres
Apparatus required
Student's organ bath.
Sherrington rotating drum.

Procedure

An overnight fasted Gunea pig weighing about 400gms was sacrificed by a blow on the head and by carotid bleeding. The abdomen was suddenly opened and ileocaecal junction was found out. A small piece of ileal portion was cut and removed and placed in a disk, containing warm Tyrode solution.

The lumen of the ileum was gently rinsed out by pushing Tyrode solution into it, 3cm length segment was cut from this part of ileum and was tied with thread on both ends without closing the lumen and the tissue was mounted in the organ bath containing Tyrode solution maintained at 37 degree celcius and bubbled with air by an oxygen tube.

First the drum was allowed to run for 1 minute from the baseline. Drug were given to study the inhibiting effect of Histamine 0.2ml of Histamine was added and allowed to run the drum for 30 seconds. Thus the tissue was standardized and then the drum was stopped and the Histamine was washed out.

Again the Tyrode both 1ml of test drug was added to the organ both till the level comes to the baseline. The drum was allowed to run for 1 minute.

To the organ both 1ml of test drug was added, waited for1 minute then 2.0 ml of Histamine was added and the drum was allowed to run 30 seconds. The response was recorded. Then the drum was stopped and the Histamine solution and test drug solution were washed out. Then the above experiment was done for 0.2 ml dose of histamine. The drug was allowed to run for 30 seconds. The response was recorded.

Then 0.2ml of Antihistamine and 0.2 ml of histamine was added and the drum was allowed to run for 30 seconds. There was no elevation in the graph and it seemed to be a baseline. Then 0.2 ml of histamine was added to standardize the tissue. Then the tracing was labeled and fixed.

Inference

From the graph it is inferred that the test drug antagonize the effect of Histamine when added together. So the drug kanjankorai chooranam has get Anti-Histamine activity.[1]

Conclusion

The present study, for the first time supports the efficacy of Kanjankorai chooranam and we conclude that it's a effective treatment for kabasuram due to its multiple therapeutic actions compared to Paracetamol and anti allergens.

The study may be taken over to further researches and also throw new glitters to the siddha medicine.

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