



Research Article

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## Anti-histamine activity of polyherbal drug-Ilavangathi Choornam

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### ABSTRACT

The polyherbal formulation, Ilavangathi choornam, a Siddha formulation had been analysed for its anti-histamine activity by guinea pig ileum preparation. The test drug Ilavangathi choornam is administered as 1mg/ml. The concentration-response curve of histamine and its modification by the test drug is recorded by kymograph. In this study, response of histamine which contracts smooth muscle is decreased after the administration of test drug which shows that the given sample may have a smooth muscle dilating property.

**Keywords:** Polyherbal Siddha formulation, anti-histamine activity, guinea pig ileum, smooth muscle dilating property.

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### INTRODUCTION

The Ilavangathi choornam is a polyherbal formulation, mentioned in Siddha literature[1] indicated for Cough, Wheezing, peripheral neuritis, giddiness, diarrhoea, menorrhagia, haemorrhoids, fever etc. This trial drug consists of twenty nine raw drugs namely, *Cinnamomum zeylanicum*, *Cinnamomum verum*, *Anethum graveolens*, *Nigella sativa*, *Elatteria cardamom*, *Coriander sativum*, *Cuminum cyminum*, *Abies spectabilis*, *Clerodendron serratum*, root of *Piper longum*, *Piper nigrum*, *Nardostachys jatamansi*, *Myrstica fragrans*, maze of *Myrstica fragrans*, *Trachyspermum ammi*, *Costus speciosus*, *Hyocyamus niger*, *Embelia ribes*, *Quercus infectoria*, *Anacyclus pyrethrum*, *Barringtonia acutangula*, *Messua ferrea*, *Alpinia officinalis*, *Zingiber officinale*, *Piper nigrum*, *Piper longum*, *Sida acuta*, *Plectanthes amboinicus*, *Trigonella foenum graceum*. It has been indicated as therapeutic usefulness in wheezing (Iraippu), hence the drug has been elucidated for its scientific validation.

### EXPERIMENTAL SECTION

#### CONCENTRATION RESPONSE OF HISTAMINE AND MODIFICATION AFTER THE TEST DRUG

##### AIM:

To record the concentration response curve of histamine and its modification by an anti – histamine using guinea pig ileum preparation.

##### PRINCIPLE

Histamine is an antacid having profound physiological effect in the body besides the triple response caused by it, histamine has spasmogenic response on intestinal smooth muscle. By acting on H<sub>1</sub> – histamine receptors it causes the contraction of intestinal smooth muscle.

- Guinea pig is highly sensitive to histamine
- The Guinea pig ileum preparation is very commonly used for isolated tissue work.
- Overnight animals are used to get better response on drugs on intestinal smooth muscles.

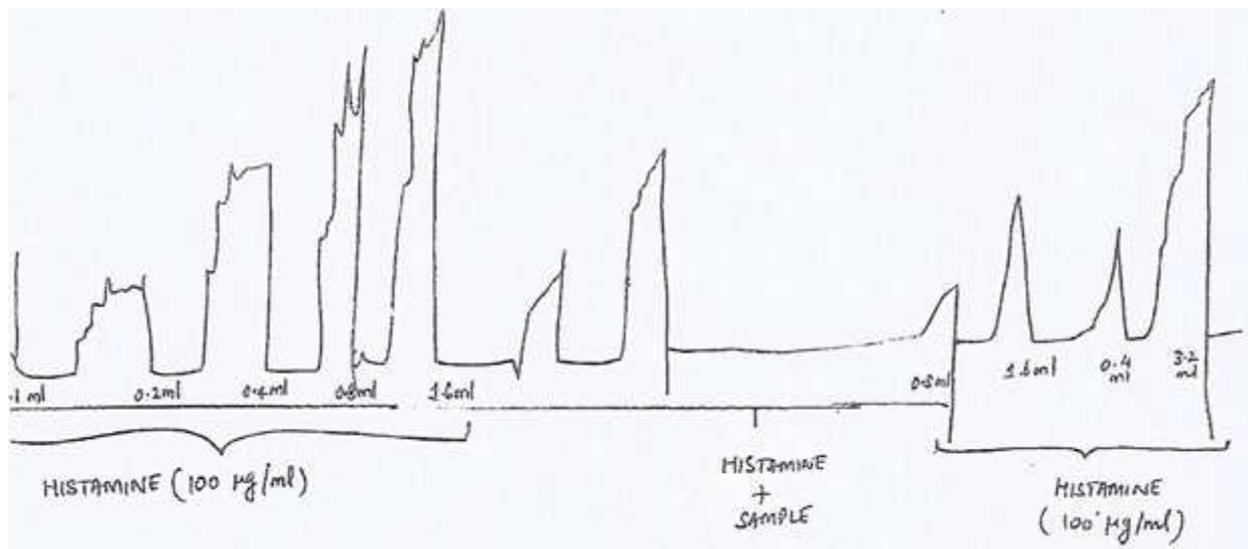
**REQUIREMENTS**

Animal: Guinea pig (400 - 600 gm, overnight fasted)

Drugs: Histamine stock solution (1 mg / ml)

Physiological solution: Tyrode

Test drug: Ilavangathi choornam (1 mg / ml)



ANTAGONISTIC EFFECT OF GIVEN SAMPLE BY USING  
GUINEA PIG ILEUM : KYMOGRAPH

DRUGS - 1. HISTAMINE (100 µg/ml)

2. TEST SAMPLE (ILAVANGATHI CHOORNAM)

PHYSIOLOGICAL SOLUTION - TYRODE RINGER SOLUTION

TEMPERATURE MAINTAINED = 37°C

TIME CYCLE = { BASELINE : TIME OF CONTACT }

= { 30 SEC : 30 SEC }

INITIAL TENSION = 0.3 to 0.5 g

**PROCEDURE**

- The Guinea pig is sacrificed by a blow on the head and carotid bleeding.
- Cut open the abdomen and lift the caecum to trace the ileocaecal junction.
- Cut and remove a few centimeter long of the ileal portion and immediately place it in the watch glass containing Tyrode solution
- Trim the mesentery and with gentle care clean the contents of the ileum by pushing the Tyrode solution into the layers of the ileum.
- Take on Piece of ileum of 2-3 cm long and tie the thread to top and the bottom and without closing the layers.
- Tyrode solution maintained at 32-35°C and bubbled with oxygen or air.
- A tension of 0.5 gm is applied and the tissue is allowed to calibrate for 30 minutes before adding drugs to organ bath.
- Record concentration dependent response due to histamine using frontal writing lever.
- Contact times of 30 sec and 5 min. time cycle are kept for proper recording of the response.
- Record atleast four concentration dependent response due to histamine.

- Add the trial drug to the reservoir containing tyrode solution and irrigate the tissue with antagonist containing tyrode for 30 minutes.
- Repeat the concentration response curve of histamine in the presence of trial drug.
- Label and fix the tracing and plot the graph as done in the experiment.

### **RESULTS**

Response of Histamine which contracts smooth muscle is decreased after the administration of test drug. Hence the given sample may have a smooth muscle dilating property.

### **CONCLUSION**

Thus, scientific validation of this Siddha formulation once again brings out the greatness of Siddhars and their pharmacological wisdom. This animal study is a preliminary study only, which may pave way to conduct clinical trials in human subjects.

### **Acknowledgement**

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### **REFERENCES**

- [1]Sigicharathnadeepam, C.Kannusamy Pillai, Thirumagal Publication, 2nd edition, **2014**, pg.125-126.