

# SHORT TERM OBSERVATION ON THE EFFECT OF CHINA IN RELATION TO THE RECTAL TEMPERATURE OF ALBINO RATS

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## INTRODUCTION

It is well known that the hypothalamus controls the body temperature by activating heat production or heat loss (Myers, 1976). Several investigations on the effect of the injection of various allopathic drugs into the hypothalamus causing a high fever or hypothermia have been worked out (Atkins, 1960; Myers and Waller, 1976). But the record of the precise body temperature after drugging using homoeopathic drugs has been paid little attention except a few related works (Ramayya, 1977). Therefore a preliminary work on the effect of China on the rectal temperature of male albino rats has been done.

## MATERIALS AND METHODS

The male albino rats of wistar breed got from Madurai Medical College were maintained in the laboratory and used for all the experiments. The weight of the rats varied from 70-90 g.

For measuring the rectal temperature of the rats a clinical thermometer was introduced into the rectum 2cm deep and the rectal temperature was recorded 2 min. later. Holding the rat in the hand comfortably gave better results of the rectal temperature than any other method.

The homoeopathic drug China 1000 (25 globules) and 200 (40 globules) were dissolved separately in 2-3 ml distilled water by powdering in an embryo cup. The water bottles were removed in the previous night and the drug was administered orally through a small pipette on the next day morning. Control rats were fed with water alone.

China 1000 (5 drops) dissolved in 0.5 ml saline was injected intramuscularly into the hind legs of the rats. The control rats were injected with 0.5 ml saline only. The rectal temperature was noted for a period of 6 hrs. after drugging. Totally 45 rats have been used in this study.

## RESULTS

Rats administered orally with China 1000 (25 globules) showed two types of responses. A few rats showed a decrease (hypothermia) of rectal temperature by 3.5°F within 60 min. after administration of the drug (Fig. 1) and thereafter it gradually increased to normal level. Majority of the rats showed a slight increase in rectal temperature within 15 min. after drugging and a decline of 2.1°F after 60 min. (Fig. 2).

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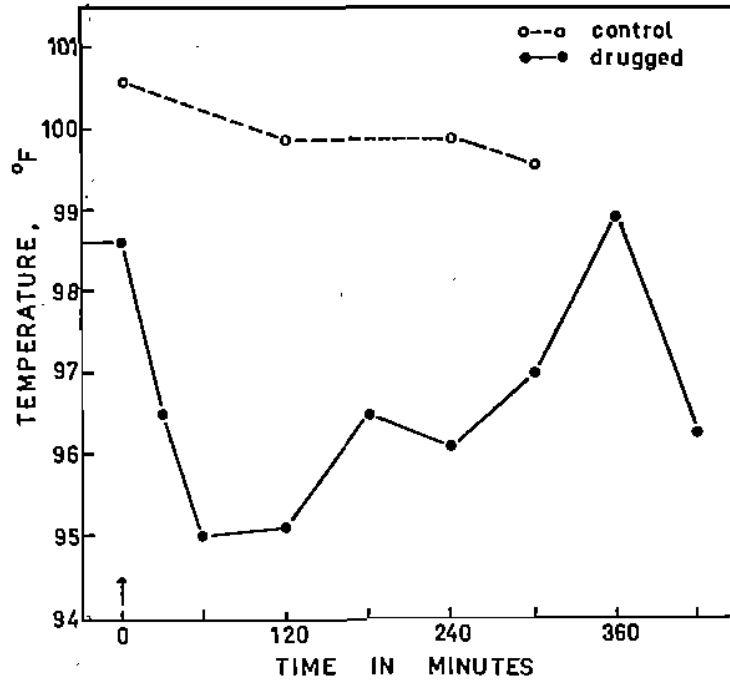


Fig. 1. Effect of China 1000 (25 globules) showing the average value of three male rats. The vertical arrow indicates the time of the drug intake.

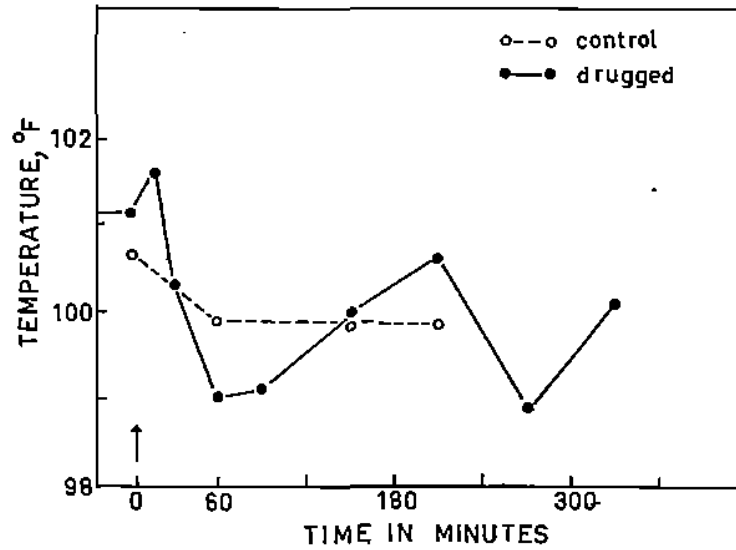


Fig. 2. Effect of China 1000 (25 globules) showing the average value of three male rats. The vertical arrow indicates the time of the drug intake.

The rats after intramuscular injection with 5 drops of China 1000 (Fig. 3) exhibited a peak depression in rectal temperature after 165 min. and later increased to the normal level. Oral intake of China 200 (40 globules) in rats also produced a progressive hypothermia (Fig. 4) up to 90 min. after drugging and thereafter it increased.

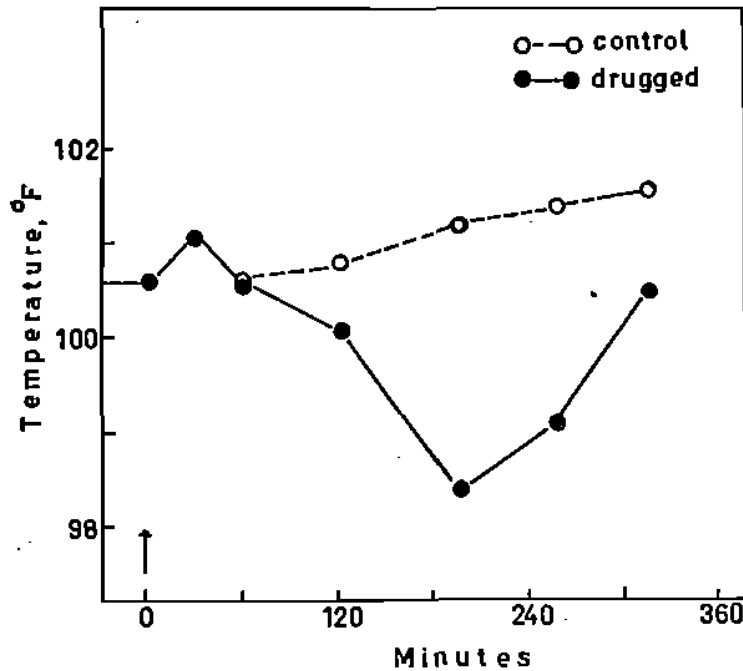


Fig. 3. Effect of intramuscular injection of 5 drops of China (1000) showing the average value of three male rats. The vertical arrow indicates the time of the injection of the drug.

#### DISCUSSION

The action of China is characterised by three stages, chill, heat and sweat like the common marsh-intermittents. The cinchona-fever is usually exhibited by rush of blood to the head with redness and heat of the cheeks and coldness of the rest of the body. Even during the chill and before hot stage has developed itself a striking swelling of the subcutaneous veins can be noticed (Teste, 1975). One group of rats showed hypothermia and the other a slight increase in the rectal temperature and then hypothermia after drugging. Similar trend has been noted in human beings also as Teste (1975) points out: "The type of the cinchona-fever varies as does likewise the hour when the chill commences. In some individuals the chill may even be wanting and the paroxysm set in with dry heat".

Myers *et al* (1973) found that intravenous injection of 2.0 ml of a

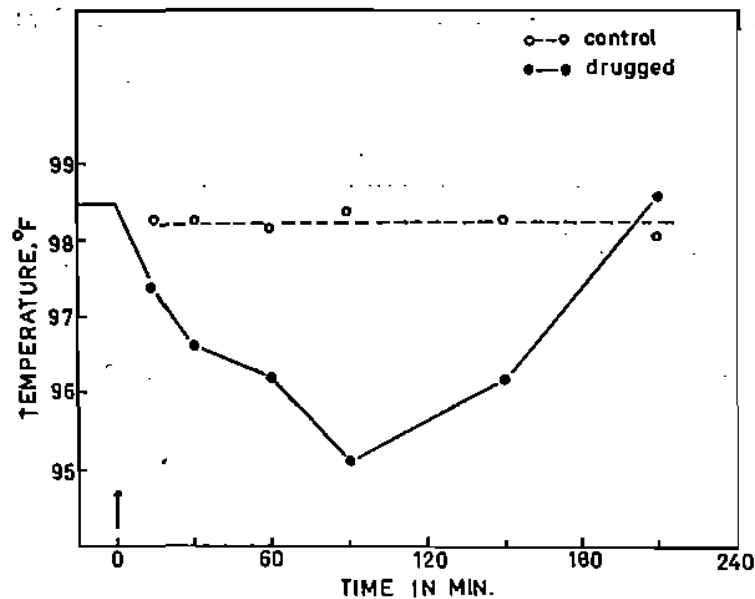


Fig. 4. Effect of China 200 (40 globules) showing the average value of three male rats. The vertical arrow indicates the time of the drug intake.

suspension of killed *Escherichia coli* cell bodies produced a biphasic fever in the Rhesus monkey, *Macaca mulatta* and intercerebral injection of the same pyrogen at 1/4000 of the intra-venous dose produced a quite similar biphasic fever. Similarly Villablanca and Myers (1965) found that micro-injection of *Salmonella typhosa* into the hypothalamus evoked a fever in concentration as little as 1/8000 of that required to produce a similar fever when the pyrogen was given intravenously. This clearly shows that larger amount of pyrogen is required to produce fever in the intravenous route than that injected into the hypothalamus directly.

Simple oral administration or intravenous injection of China produces a clear temperature depression probably reaching and involving the hypothalamus by circumventing the blood brain barrier whereas pyrogen (allopathic) cited above depends on the concentration and routes of injection.

Myers (1969) suggested that there should be an eventual development of some pharmacological means of temporarily circumventing the blood brain barrier. Thermoactive compounds which can be orally administered can then exert a direct action on appropriate diencephalic sites. In the light of this suggestion many homoeopathic drugs would throw more light to understand the mechanism of thermoregulation as oral administration alone produces a clear effect on the body temperature.

## SUMMARY

China 200 and 1000 administered orally to male albino rats clearly depresses the rectal temperature within 15-30 min. after administration possibly reaching and involving the hypothalamus.

## ACKNOWLEDGEMENTS

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## HOMOEOPATHISTS AND HOMOEOPATHY

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similar for Homoeopathy, if we put all our sincerity and will into the effort? Surely such a type of qualification in Homoeopathy should carry due weight and do away with much of the miserable misrepresentation of this finest of therapeutic sciences!

—The Homoeopathic Recorder, April 1953