PHARMACOLOGICAL VALIDATION OF TWO SIDDHA DRUGS
(PARPAMS) FOR ANTIULCER EFFECT IN ALBINORATS: A
PRELIMINARY STUDY

A. Thanga Thirupathi, R. Venkatanarayanan, R. Hemalatha.
Department of Pharmacology, S.B. College of Pharmacy, Sivakasi.

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ABSTRACT: Siddha system of medicine is one of the oldest medical system of India. Existed separately in early times. Although this system declined in later years, in the wake of changing mode of life modern medicine, it continued to sustain its influence on the masses Parpam is a group of siddha drugs, which is used in diarrhea, colic, peptic ulcer, asthma, chronic cough tuberculosis, etc. During the present study Sangu Parpam and silasathu Parpam were selected and evaluated for its antiulcer effect in albino rats, which could not be attempted by researchers earlier.

INTRODUCTION

The use of new drugs, premature use of new methods, unnecessary and excessive medication, increasing side effects and to an increasing insistence on the patient playing a passive role there had arisen the dissatisfaction of the present system of medicine and the search and revival of the alternative system of medicines.

DISSATISFACTION WITH THE ALLOPATHIC SYSTEM

The basis of the allopathic system is diagnosis, the principle being to find the root and put it out in order to destroy a tree. Diagnosis is based on a balancing of all inputs and informations. The increasing cost, increasing unfounded claims—unaccompanied by increasing success – has led to dissatisfaction with this system.

THE NEED FOR CHANGE IN OUR APPROACH:

At present dominating importance is given to the disease-process and the Doctor, rather than the medicine and the maker of that medicine—the pharmacist. The patient plays passive role. The emphasis should be shifted from curative medicine to maintenance and preservation of health. Ideally we have within us the power and knowledge to become and remain health and to cure illness1.

Since the present allopathic system of medicine has side effects, we have selected the drugs from one of the alternative medicine especially siddha drugs, which are native to Tamilnadu, to evaluate their antiulcer effects during the present study. Siddha system has been in practice right from the ancient period.

There are three basic defects in this system, namely,

1. Lack of standardization and quality control.
2. Lack of experimental data to prove their credibility
3. No defined mechanism of action.

Without considering the above said limitation, both the siddha Practitioners and
the patients have been using this system of medicine possibly due to very low doses administration with least side effects\textsuperscript{2}.

**MATERIALS:**

The materials for the present study constitute two well-known siddha formulations Sangu Parpam and Silasathu Parpam, which are extensively used as antiulcer agents. The samples are procured from the Indian Medical Practitioners Co-operative Pharmacy and Stores Ltd., Thiruvanmiyur, Madras-41.

The term ‘Parpam’ is apparently a Tamil equivalent to the Sanskrit work ‘Bhasma’. The correct Tamil translation would be ‘Neeru’, which would mean ash. Saambil is another word equivalent to ash or calx. However the term parpam has held the ground in siddha medicine. Parpam is equivalent to calx, which is prepared by a process of calcination\textsuperscript{3}.

The solvent ghee used in the present study is procured locally from Aavin milk dairy, Rajapalayam. Ranitidine (standard) is denoted by Glaxo Pharma, a division of Glaxo (India) Ltd. Mumbai.

Wistar albino rats of either sex weighing between 150 to 200 gms are used for the present study. They are provided with standard pelleted diet and water ad libitum. We have converted the human dose of siddha drugs into animal dose as per the standard surface area ratio method\textsuperscript{4} (Table I). All the drugs are given in oral routes. Six animals are used in each group.

**METHODS**

The antiulcer screening of Sangu parpam and Silasathu Parpam is carried out in albino rats using two well defined experimental ulcer models viz.,

1. Phenylbutazone induced ulcer model and
2. Stress induced ulcer model.

**PHENYLBUTAZONE INDUCED ULCER MODEL\textsuperscript{5}**

36 hours-fasted albino rats of either sex were selected. The drug Phenylbutazone in 1% CMC suspension in water was orally administered at a dose of 100mg/kg to all animals. Two doses were administered at an interval of 15 hours and after 6 hours of the second dose administration of Phenylbutazone, the animals were sacrificed and examined for degree of gastric mucosal damage\textsuperscript{6}.

The test siddha drugs and the standard (Ranitidine) were administered 30 minutes prior to each dose of Phenylbutazone to assess gastroprotective effects of the study drugs (Table II).

**STRESS INDUCED ULCER MODEL**

The major advantages of Stress induced ulcer model is that it is technically simple without the requirement of either anesthesia or surgery. Further stress induced ulcer bring in central nervous system into play in the lesion formation\textsuperscript{7,8,9}.

**COLD AND RESTRAINT ULCERS\textsuperscript{10}:**

In this method wistar albino rats are deprived of food for 12 hours. They are then immobilized in a stress cage and forced to remain in a cold room (4-6°C) for 3 hours. The animals re sacrificed by a blow on the head and the ulcer score is calculated as described for restraint ulcers\textsuperscript{11,12}. The test drugs and the standard are administered 30 minutes before immobilizing the animals (Table III).
The above observation supports our humble view that both siddha formulations are indeed good antiulcer agents.

CONCLUSION:

In future, we can extend this work further, for the standardization of the above said drugs, toxicological studies, by different ulcer models, so far not attempted.

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### TABLE I

| S.No. | Name of the Drug   | Drug as per Literature | Dose used in albinorats (mg/kg) | Dose administrated (mg/kg) | Physicians dose | Dose used in albinorats (mg/kg) |
|-------|--------------------|------------------------|---------------------------------|-----------------------------|-----------------|--------------------------------|
| 1.    | Sangu Parpam       | 100-200 mg with butter twice daily | 36                              | 200mg                       |                 |                                |
| 2.    | Silasathv Parpam   | 500 -1 gm with butter /ghee twice daily | 180                             | 1mg                         |                 |                                |
| 3.    | Ranitidine         | 300 mg once daily       | 27                              | 300mg                       |                 |                                |

### TABLE II: EFFECT OF SIDDHA DRUGS ON ULCER SCORE IN PHENYL BUTAZONE INDUCED EXPERIMENTAL UNCRERATION IN ALBINO RATS

| Group | Drugs            | Dose administrated (mg/kg) | Ulcer Score Mean ± SEM |
|-------|------------------|----------------------------|------------------------|
| 1     | Silasathv Parpam | 180                        | 1.5* ± 0.2885          |
| Group | Drugs               | Dose administrated (mg/kg) | Ulcer Score Mean ± SEM |
|-------|---------------------|-----------------------------|------------------------|
| I     | Silasathv Parpam    | 180                         | 1.5* ± 0.2885          |
| II    | Sangu Parpam        | 36                          | 1.75* ± 0.25           |
| III   | Ranitidine          | 27                          | 1.5* ± 0.2885          |
| IV    | Solvent Control     | 0.1ml/100g                  | 2.5 ± 0.2885           |

*p< 0.05 Vs control (Student’s –test)