

A review on siddha drug Palagarai (*Cypraea moneta linn.*)

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ABSTRACT

This article reveals the experimental results on marine source *palagarai* (*cypraea moneta linn.*) used in siddha system of medicine. It's multi component natural occurring mineral substance. There is long history of use of *palagarai* in traditional Indian Materia medica unfortunately lacks of scientific evaluation. Present study was undertaken to prove scientifically the significance of the marine drug *palagarai*. This article may contribute to current research works in traditional system system.

Keywords: *Palagarai* (*Cypraea moneta linn.*), Siddha, Marine drugs.

1. INTRODUCTION

Siddha system of medicine is one the oldest system practiced in the southern part of India. The system is elaborately written in Tamil literature by saint siddhars. In the system of medicine based on *Pancha bootha* theory and siddha medicines are commonly prepared from plants, metals, minerals and marine products [1]. *Palagarai* (*Cypraea moneta*) is one the five marine resources in siddha text (Kadalpadu Draviyangal) which is also known as money cowrie. *Palagarai* is the species of small sea snail a marine gastropod mollusk in the family cypraeidae. The marine shell resembles the size of tamarind seed upto almond size and its available in white, red and yellow colours [2]. The medicinal preparations of *palagarai* were treating Anemia, Dropsy, Liver disease through the guidance of siddha text. The present study was about to review the scientific validation of *palagarai*.

1.1. General description

Palagarai (*Cypraea moneta*) belongs to the cowrie family. Its also called money Cowrie family because historically widely used in pacific and Indian ocean countries as shell money before coinage occurs in area with warm water temperature. This cowrie lives in rocky areas and shallow water and on exposed reefs at low tide. It feeds on algae and marine vegetation growing on

pieces on dead coral. Its collected from the sea snail by removing the fleshy part. The upper surface is smooth and convex. These shells have medium size in teeth, not extending across the base. They have heavily margined with base and margin white and unspotted [3].



1.2. Scientific classification

| | |
|---------|--------------|
| Kingdom | : Animalia |
| Phylum | : Mollusca |
| Class | : Gastropoda |
| Family | : Cypraeidae |
| Genus | : cypraea |
| Species | : Moneta |

1.3. Vernacular names of Palagarai [4,5]

Tamil -palagarai

Telugu -Gavalu

Sanskrit-varatika

English- cowrie

Hindi -kaudi

The marine shell has got bitter, mucolytic and hypothermic properties. On external application, it causes skin rashes. The white marine shell controls thirst, diarrhea, indigestion, Jaundice, toxic fever, eye diseases, enlargement of liver and spleen, asthma etc [2].

1.4. Purification

The purification process is the initial step for the medicinal preparation in siddha system. The required amount of palagarai is taken for purification and its kept immersed in lime juice for 24 hours after that its washed and dried well in sunlight. There is various methods of purification also mentioned in siddha text but widely used purification method is lime juice method which is simple and best method for medicinal preparation.

They are insoluble in water. Its soluble in hydrochloric acid with effervescence. They contain phosphate, fluoride and carbonate of calcium, magnesium phosphate, manganese and sodium chloride [5]

Siddha formulation of Palagarai

- *Palagarai parpam*
- *Palagarai chenduram*
- *Palagarai chunnam*

These medicinal preparation were used for treating many chronic disease along with different type of adjuvants.

1.5. Pharmacological activity

Cowrie shells were used in many area of medicine, examples include deadly venoms of some cowries shell used to help the victims of strokes and heart diseases and to produce a revolutionary new drug for chronic pain control. The cement of the shell is used as possible cement for bone fractures. Powdered pearl's from the shell are used as a topical eye medicine and it has been scientifically proved to have some anti-inflammatory effect in painful conditions called conjunctivitis and also used as calcium supplement both for human and animal and its an inhibitor of cancer in mice [6].

If the *Palagarai parpam* given with suitable adjuvants, it cures poisons caused by

induced and natural rabies of mad animals like dog, fox, human, cow, buffalo and pig [2].

1.6. Chemical constituents

The white oxide form (parpam) of *palagarai* prepared to treat the many diseases like anemia, jaundice, dropsy, Colic pain. The pharmacological action was tremendous because of presents of many vital micro elements like Ca,K,Mg,Mn,Cu,Zn and Fe. Inorganic constituents of raw *palagarai* and *Palagarai parpam* shown in the table 1 [7].

Table - 1: Inorganic constituents

| Name of parameters | Raw palagarai | Palagarai parpam |
|----------------------|---------------|------------------|
| Total Ash (%) | 4.13 | 2.06 |
| Organic Carbon (%) | 0.52 | 1.09 |
| Total Nitrogen (%) | 0.56 | 0.72 |
| Total Phosphorus (%) | 0.36 | 0.62 |
| Total Potassium(%) | 3.26 | 3.49 |
| Total Calcium (%) | 15.63 | 19.32 |
| Total Magnesium (%) | 8.56 | 8.43 |
| Total Sulphur (%) | 0.73 | 0.94 |
| Total Zinc (ppm) | 1.56 | 1.48 |
| Total Copper (ppm) | 0.52 | 0.42 |
| Total Copper (ppm) | 102 | 113.6 |

1.7. Acute toxicity study

Animals (mice) treated with *Kapardika bhasma* did not show any sign of toxicity in the acute toxicity study. No abnormal behavior and mortality was observed during 72 hrs after drug treatment in any experimental group [8].

1.8. Sub chronic toxicity study

The criteria for the assessment of effect of *Kapardika bhasma* administration in rats was based on the appearance of any kind of abnormal signs and symptoms, feed and water intake and growth pattern. The hematological, biochemical parameters and biopsy were also taken into consideration for assessing the toxicity of above-mentioned drugs [8] and it not shown any toxic effects.

Acute and subchronic toxicity studies of the drug used in the study clearly showed the non-toxic nature and highly safety profile of *Kapardika bhasma* in rodents [8].

2. DISCUSSION

Palagarai is the one the best marine product widely used in siddha system of medicine and better choice of drug for calcium and iron supplement for both human and animal and

treating many diseases. Chemical analysis are proven that reduction of heavy metals are noted and toxicity studies are vouch the safety of drug. All the natural resources using for purification and medicinal preparation plays in important role in removing of toxicity and increases the efficacy of the drug.

3. CONCLUSION

The importance of *palagarai* mentioned in siddha literature has to be reviewed for scientific validation. Medicinal preparation of this drug emphasizing the need for more research to explain the mechanism of action. The importance of the study was convert the experience based medicine to evidence based medicine by the process of reverse pharmacology.

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