

A Review on Chunnam an Effective Siddha Higher Order Medicine

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Abstract: Siddha's system of medicine is one of the ancient systems of medicine including a lot of research data without scientific evidence. Siddha medicine has 32 types of internal medicines and 32 types of external medicines which includes 24 different processes. Siddha system of medicine has a huge number of medicinal preparations it possesses very effective principles to treat various ailments with minimal side effects. *Chunnam* (Calcinated nanoparticle powder) is one of the 32 types of internal medicine in Siddha. *Chunnam* is white in color. *Chunnam* is prepared from metals, minerals, and marine products. *Chunnam* like higher-order medicine has more therapeutic value minimal dose. In *Chunnam* preparation, mercury *paadaana* or metals are triturated either individually or combined by adding herbal juices (depending on the preparation) then kept in the crucible and sealed with mud-pasted cloth. Then they are blown and made into white powders and then it was cooled and stored in an airtight glass container. The Siddha higher-order medicine *Chunnam* is a very highly acclaimed unique dosage form it was in an alkaline group of drugs that is indicated for chronic diseases. *Chunnam* such as *Thaalaga chunnam*, *Sangu sunnam*, *Pavala veera chunnam*, *Mutthu chunnam*, *Padigara chunnam*, *Nandukkal chunnam* etc. It is used for the treatment of chronic diseases like leprosy, tuberculosis, cancer, urolithiasis, etc, This review article attempts to facilitate the *Chunnam* preparations mentioned in Siddha literature, and its applications were explained broadly.

Keywords: Siddha system of medicine, Internal medicines and external medicines, Chunnam.

1. INTRODUCTION

Siddha system of medicine is one of the great heritage of India. Siddha medicine has 32 types of internal medicines and 32 types of external medicines which includes 24 different processes. Siddha system of medicine has a huge number of medicinal preparations it possesses very effective principles to treat various ailments with minimal side effects. *Chunnam* (Calcinated nanoparticle powder) is one of the 32 types of internal medicine in Siddha. *Chunnam* is white in color. *Chunnam* is prepared from metals, minerals, and marine products. *Chunnam* like other higher-order medicines has more therapeutic value in minimal dose [1].

Chunnam- Method of preparation

In *Chunnam* preparation, mercury *paadaana* or metals are triturated either individually or combined by adding herbal juices (depending on the preparation) then kept in the crucible and sealed with mud-pasted cloth. Then they are blown and made into white powders and then it was cooled and stored in an airtight glass container.

Chunnam – Higher order medicine

The Siddha higher order medicine *Chunnam* is very highly acclaimed unique dosage form in alkaline group of drugs which is indicated for chronic diseases [2].

Shelf life of Chunnam

“katturukku kalangunaa noonu

rellida *chunnamiyin* noorukar panchatthu”

It retains its medicinal value for 500 years.

Various chunnam in the Siddha system of medicine: [1],[3]

- *Savukkara chunnam* *Uppu kattu sara chunnam*
- *Indhuppu chunnam*
- *Poora chunnam*
- *Veera chunnam*
- *Vediuppu chunnam*. *Seena chunnam*
- *Kalluppu chunnam*
- *Saara chunnam*
- *Vengara chunnam*
- *Thurusu genthi chunnam*
- *Thaambira chunnam*
- *Muthu chunnam*
- *Vanga chunnam*
- *kalnaar chunnam*
- *Thurusu chunnam*
- *Narpavala chunnam*
- *Rasa chunnam*
- *Palagarai chunnam*

Important chunnam preparation and its indication [1]

Muthu chunnam* prepared by *saranai ver kuppi

Water – *Vatha rogam*

Ghee – *Veppam*

Butter milk – *Pittha rogam*

Muthu chunnam* prepared by *Nilakadambu Juice

Smear *Muthu chunnam* into betal leaf was indicated for *Shayam*, *agni mantham*, *vikkal*, *arusi* and provides gum strength.

Kalnaar chunnam – Kaaya siddhi

Purified *kalnaar* was ground with lime juice and made into cakes (*Villai*). Cakes are put into *kugai* and then heated by using *thrutthi*. *Chunnam* is settled at the bottom of *the kugai* in white color.

Medicinal uses:

Smear this *chunnam* into betel leaf will rejuvenate the body.

Scientific studies :**Pharmacological activity :**

S.No	Medicine name	Pharmacological activity	Inference
1	<i>Vediuppu Chunnam</i>	Anti lithic activity	Combination therapy of <i>aerva lanata</i> juice and <i>vediuppu chunnam</i> was found to be more effective in experimental hyperoxaluric rats ^[4] .
2.	<i>Rasa chunnam</i>	Anti bacterial activity	Shows moderate anti-bacterial activity against <i>K. pneumonia</i> , <i>S. aureus</i> , <i>V.cholerae</i> , and <i>S.typhi</i> at 2,3 and 4 mg concentration respectively. Anti-bacterial activity shows various pathogens at 1 mg concentration ^[5] .
3	<i>Pavala veera chunnam</i>	Anti hyperlipdemic activity	After the <i>pavalaveera chunnam</i> administration test animals show decreases in the body weight and significant decreases in the total lipid profile ^[7] .
4	<i>Narpavala chunnam</i>	Anti asthmatic activity	<i>Narpavala Chunnam</i> shows inhibition of milk-induced leucocytosis in mice. Inhibition of histamine-induced bronchospasm in guinea pigs. NPC shows good anti-inflammatory and immune modulatory activity ^[9] .
5	<i>Venkara chunnam</i>	Diuretic activity Anti spasmodic activity Lithotriptic activity	Drug drug-treated group shows an increased volume of urine excretion. It produces significant Spsmodic activity in guinea pigs. Prevents calculi formation in kidneys by increased elimination of calcium, oxalate, magnesium, phosphate, uric acid, and creatinine which decreases the circulating level of those minerals ^[10] .
6	<i>Sangu chunnam</i>	Analgesic activity Anti inflammatory activity	Significant analgesic activity was noted in increased reaction time in Eddy's hot plate method in rats and Significant acute anti-inflammatory activity in the carrageenan-induced rat paw edema method ^[11] .
7	<i>Pooneeru chunnam</i>	Anti ulcer activity	<i>Pooneeru Chunnam</i> shows anti-ulcer activity with a cytoprotective mechanism in peptic ulcers ^[15] .

S.No	Medicine name	Pharmacological activity	Inference
8	<i>Vengara chunnam</i>	Hepatoprotective activity	<i>Vengara parpam</i> reduces the lipid factors completely in the liver and its related enzymes. The test drug possesses more calcium which could be evidence for its hepatoprotective activity [16].
9	<i>Velvanga chunnam</i>	Analgesic activity Anti arthritic activity	In drug-treated RA patients relief from pain swelling of the joints, restricted motion, and morning stiffness. ESR level greatly decreases after treatment [18].
10	<i>Navachara chunnam</i>	Ovulation inducing and folliculogenetic activity	This study of drug-treated rats shows increases in the level of FSH level and Decreases in the testosterone hormone level in plasma [19].

Standardizations of *Chunnam*

- Standardization was done for *Sangu Chunnam* its characterization shows nontoxic in the human dose level. SEM shows *Sangu chunnam* particle size 56-172 nm. XRF analysis shows 76% of calcium oxides. ICP-OES results that *Sangu chunnam* has a higher concentration of Ca (1419 mg /l). Qualitative and quantitative analysis of *Sangu chunnam* revealed that non-toxic to humans and enhances its therapeutic value [6].
- Standardization *Palagarai Chunnam* shows nanoparticle size ranging between 1 to 3 μm in the SEM method. The presence of heavy metals analyzed by using the ICP-OES method shows heavy metals in *Palagarai Chunnam* was WHO permissible limit. FTIR analysis shows organic functional groups such as Alkenes, Phenyl, Arenes, Amines (2o), and Sulfate [12][13].
- ICP-OES analysis of *Padigara Chunnam* revealed that heavy metals are below the detection limit. Particle sizes are nano in range, In biochemical analysis, shows the presence of sulfate, calcium, and ferrous iron [17a]
- Analysis of *Narpavala chunnam* is alkaline in nature. Analytical specification showed that the drug contains Ca, K, Mg, Fe, and S. Preclinical analysis of *Narpavala Chunnam* shows particle size varied from 500 nm to 800 nm in DLS analysis [20].

Toxicity study :

S.No	Medicine name	Toxicity study	Inference
1	<i>Sangu chunnam</i>	Acute and sub acute oral toxicity study	There were no significant general behavioral changes or body weight changes in drug-administered rats. No significant abnormality in hematological, biochemical, serological and histopathological observation. No significant abnormality in hematological, biochemical serological, and Histopathological observation [8].
2	<i>Narpavala chunnam</i>	Acute oral toxicity study	Did not show any toxic effects in drug-treated animal groups [9].
3	<i>Pooneeru chunnam</i>	Acute and subacute toxicity study	In animals, it was revealed that safety to the drug pooneeru chunnam did not show any significant abnormality [14].

S.No	Medicine name	Toxicity study	Inference
4	<i>Padigara chunnam</i>	Acute and chronic toxicity study	Acute toxicity studies did not show any significant changes in animals. Chronic toxicity shows some remarkable changes in the kidney, liver, heart, and brain tissues. There increase in the animal weight was noticed. No significant abnormality in the hematological indices. These changes were noticed during the long-term administration of the test drug [17b].

2. DISCUSSION

Chunnam is a Siddha herbs mineral formulation that is very popular worldwide due to its nanomedicine form, increased therapeutic efficacy, increased sustainability & bioavailability, minimal side effects, minimal dosage level, different dosage forms, better absorption, and longer shelf life. *Chunnam* possesses various therapeutic uses it has special techniques for preparation it comes under life-saving and miracle medicine [21].

3. CONCLUSION

Nanomedicines are recent to modern science, it seems Siddhars has mentioned plenty of nanomedicines preparation in literature since ancient times. In the future, this work will be extended to evaluate the mechanism of action in *Chunnam*, and its therapeutic uses were validated scientifically to explore the Siddhar's spiritual knowledge.

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