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A REVIEW ON SIDDHA POLY HERBO MINERAL PREPARATION KANAKALINGA KARPURA MEZHUGU

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ABSTRACT

The present study is aimed at the characterization of preparatory methods of Indian Siddha medicine, poly herbomineral formulation Kanakalinga karpura mezhugu. Siddha drugs are specially characterized by herbomineral formulations and most of the metallic compounds are converted into ash form under special combustion process. In this review, Siddha medicine Kanakalinga karpura mezhugu does not undergo any combustion process but converted as a Mezhugu preparation by a special continuous grinding method. Specified purification method employed on each drug during the various steps preparation, alleviates the toxic effects. The review highlights the appropriate purification methods of individual drugs, method of compounding and finally the conversion of crude drugs into Mezhugu.

Keywords: Siddha, Suddhi murai, Mortar and pestle, grinding, internal medicine, shelf life period, Kanakalinga karpura mezhugu

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INTRODUCTION

The Siddha system of Medicine is one of the ancient medical systems that started to save biological live-hood from the seers of scientific as well as spiritual personalities called Siddhars. Siddha system of medicine consists of drug preparation methods, administration technique and dietary regime advices. Day to day practices in Siddha medicine bring the essentiality of selection of raw drugs, purification, adaptations of meticulous descriptions on drug processing, administration methods, use of adjuvant and indications for various human ailments. Siddha medicine covers various inorganic pharmaceutical preparations that encompass usage of metals, non-metals, minerals, animal products and salts with or without plant drugs or processed in plant drugs. These inorganic groups of drugs are usually appreciated for their smaller dosage, long shelf-life, easy palatability instant relief, for chronic diseases.

The Siddha system is an Indian system of medicine which is developed and mainly practised in Tamil Nadu and other parts of Southern India since ancient times. The materia medica of Siddha system encompasses around 500 medicinal plants, 150 metals and minerals, 150 animals and their derivatives. It depends largely on drugs of metallic origin in contrast to Ayurveda, which mainly depends on drugs of plant origin.

Generally, the method of preparation of metal based Siddha medicines involves conversion of minerals or metals into the oxide or sulphide form by various herbal treatments followed by repeated high temperature calcination and grinding cycles from Suddhi (purification or detoxication) to finished drug. The mezhugu thus obtained constitute ultra small particles and are taken along with vehicles such as milk, honey, butter, ghee etc according to the disease. This makes these drugs easily assimilable, eliminating their harmful effects and enhancing their biocompatibility. The rigidity of the methods of preparation for a particular mezhugu makes the drug, unique. However very few studies have been carried out to understand the physico-chemical nature of these type of traditional medicines. Though metal based Siddha medicines are time tested drugs, extensive research works should be carried out to explore its effectiveness and to bring all Indian Traditional Systems into the limelight.

Mezhugu as per Classical Texts

The word 'Mezhugu' is indicative of soft, semisolid greasy substance, similar to wax. In Tamil language, mezhugu is known as waxy substance which is not sticky when touching or pressing. The word 'Kanaka' in Kanakalinga karpura mezhugu denotes 'Gold color' (Sparkling yellow) obtained as an end product after purification and grinding. This preparations, dosage forms and adjuvants of Mezhugu mentioned in many Siddha classics like Bogar 7000, Bogar saptha kandam, Korakkar Chandra Regai, Urvasi rasa vatha sitka, Anuboga vaithiya navaneetham, Tamil Siddha dictionary by T.V Sampasivam Pillai. Many of these Mezhugu preparations are herbo-mineral origin and they are indicated not only for eradicating diseases and in casualties but also for prevention. This group of drugs is considered very essential since they enter into many alchemical preparations. Many of these mezhugu preparations are added to other simple adjuvants or medicaments like honey, palm jiggery, milk, ghee or manapagu, legium or churanam. Mezhugu is usually a higher order medicine looks like a semi solid greasy substance resourced from herbo mineral origin. A systemic sequential preparation methodology is essential while preparing mezhugu starting from selection, identification, purification and grinding (araippu) or in triturating with particular adjuvants like

honey or ghee, results a change in colour of the finished product.

MATERIALS AND METHODS

Materials

The Siddha medicine Kanakalinga karpura mezhugu was prepared in Kokila Siddha Hospital and Research Centre, Madurai. It has three stages and prepared as per Siddhar texts way. The traditional instruments like stone and iron mortar and pestle were used. The purification of all the drugs was performed by using clay vessels. Wooden spoons were used to mix, collect and store the drugs at all the stages.

Preparation of Kanakalinga karpura mezhugu

Stage – I (Collection and Identification)

In the first stage of the preparation of Kanakalinga karpura mezhugu the following crude and raw drugs were procured from MKM country drug traders from Madurai and the drugs identity were confirmed.

The 2 parts of crude Cinnabar *i.e* HgS or Red Sulphide of Mercury (Sathilingam), Corrosive Sublimate of Mercury *i.e* Perchloride of Mercury (Veeram) Mercuric Chloride *i.e* Bichloride of Mercury (Pooram), 1 part of Mercury (Rasam), Sulphur (Gandhakam), Copper Sulphate (Thurusu), Rock Salt (Induppu), Arsenic Trisulphide (Aritharam), Myristica fragrans (Jathikkai), Zingiber officinale (Chukku), Psoralea czorylifolia (Karbogarisi), Piper nigrum (Milagu), Piper longum (Thipili), Salsurea leppa (Kostam), Alpinia galangal (Sittarathai), Piper longum (Thippili moolam), Plumbaga zeylanicum (Sivappu Chitiramoolam), Anacyclus Pyrethrum (Akragaram), Vernonia anthelmintica (Kattuseeragam) and Carum copticum (Omam) were taken for purification (Suddhi murai).

Stage – II (Purification of raw drugs)

In the second stage of the preparation of Kanakalinga karpura mezhugu the crude and raw drugs were subjected to purification (Suddhi) process. Benzoin and camphor was grinded and made into a paste. It was uniformly rubbed over a cloth and rolled around the pieces of *Cinnabar* and burnt. After the completion burning process the cinnabar piece was allowed to get cooled and then separated. A single piece of *Corrosive sublimate* was covered by a plain cotton cloth and hanged over the liquid of tender coconut mixed with powdered camphor. Care was taken to hang without touching the upper meniscus of the liquid. The mixture was boiled for about 60 minutes and after the completion of cooling process the corrosive sublimate was taken out and allowed to dry. A Single piece of *Mercuric chloride* was tied up forming four folds of a cloth and boiled in a mixture of decoction of betel leaves (Piper betal) and pepper (Piper nigrum) over a gentle fire for about 3 hours in an apparatus called ‘

Dola yantra'. After allowed to cool, it washed with cold water and dried up under the sunlight. *Mercury* obtained by the sublimation of cinnabar was taken for purification. It was grinded with turmeric and brick dust about 3 days and then filtered for 10 times repeatedly using a thick lexured cloth. The *Sulphur* was purified by the process of melting it in cow's ghee and then immersing it in cow's milk. This process was repeated for 7 times. The purified sulphur was dried well in the shade. The pieces of *Copper sulphate* was fried in a pottery vessel till the blue colour turns into white. The rock salt was dissolved in the water and filtered out. The filtrated substance was boiled and then allowed to cool. The pieces of *Arsenic trisulphide* was filled and tied in a cloth pack and allowed to sink in a vessel contained the mixturate of calcium hydroxide and water and then allowed to boil for an hour. The process was repeatedly done for 10 times. The dried fruits of *Myristica fragrans* were cleaned from dust and insects. The dried underground stem of *Zingiber officinale* was cleaned from dust and insects and the outer coat was peeled off by using a sharp knife. The seeds of *Psoralea corylifolia* was washed well by plain water and then allowed to dry under shade. The dried fruits of *Piper nigrum* were cleaned, shade dried and then gently fried. The dried fruits of *Piper longum* was cleaned, shade dried and then gently fried. The dried roots of *Sassurea lappa* was cleaned and dried well. The dried underground stem of *Alpinia galanga* (lesser galanga) was cleaned and dried well. The root of *Piper longum* was washed, cleaned and dried well. The root barks of *Plumbago rosea* were cleaned from dust and insects. It was packed with a cloth and sunken in a mixture of calcium hydroxide and water. It was boiled for an hour and then the root barks were separated. They were allowed to dry under shade. The roots of *Anacyclus pyrethrum* were washed well and then dried under shade. The seeds of *Vernonia anthelmintica* were cleaned from dusts and insects. They were gently fried and dried under shade. The seeds of *Carum copticum* were cleaned out from dust and insects, gently fried and then dried under shade. The drugs were purified as per the ancient Siddha medical literatures.

Stage – III (Grinding and Compounding the finished product)

In the third stage of the preparation of Kanakalinga karpura mezhugu the purified (Suddhitha) crude and raw drugs were finely powdered separately except the Mercury. The quantity of each drug was accurately weighed before the process of preparation. The third stage consisted of five steps. In *step – 1* the purified Mercury and fine powder of Sulphur were mixed and grinded in a stone apothecaries mortar with a pestle about 3 hours continuously. The end product of

this step was black in colour. In *step – 2*, the end product obtained from the *Step-1* was mixed with the fine powder of Corrosive sublimate and grinded in a stone apothecaries mortar with a pestle about 24 minutes. In *step – 3*, the end product of Step - 2 was mixed with the fine powders of Arsenic trisulphide, Cinnabar, Copper sulphate and Rock salt respectively and one by one. Each drug was grinded for about 24 minutes with previous compound and the next drug was added. In *step – 4*, the end product obtained from the step – 3, was mixed well with the fine powders of *Myristica fragrans*, *Zingiber officinale*, *Psoralea corylifolia*, *Piper nigrum*, *Piper longum*, *Sassurea lappa*, *Alpinia galanga* (lesser galanga), *Piper longum*, *Plumbago zeylanicum*, *Anacyclus pyrethrum*, *Vernonia anthelmintica* and *Carum copticum* one by one. In *Step –5*, the end product obtained from the previous step was grinded well with honey about 3 hours and made the compound into semi solid (Mezhugu patham) and stored in a glass container.

Precautionary steps

- The drug should be prepared by using a stone apothecaries mortar and pestle.
- Metallic and plastic spoons should be avoided.
- Pearl shell should be used to collect the drug during the time of grinding.

Physical Properties

Dark yellow in colour resembling Gold and so representing the name Kanaka

Semisolid, soft and grease consistency

Adjuvant - Anupanam

Fresh ginger juice and honey

Dosage

130 mg to 260 mg

Twice daily on oral administration.

Duration

3 – 7 days

Uses of Kanakalinga karpura mezhugu

Manthara kasam (Type of Kabha disorder), Soothika vadha janni (Epilepsy and mental disorders), Thosam (Humoural disorder), Piramegam (Urethral discharge), Kamalai (Jaundice), Ara kirandhi (Syphilitic ulcers), Neerkaduppu (Dysuria), Suram (Pyrexia) and Soolai (Neuritis)

Dietary regimen

Old boiled rice, Curd, Butter milk, Tamarind, Mustard, Gingely Oil, Unripened Plantain Fruits, Dhal, Cucumber, Chicken, Fork, Sesbania leaves, Momordica charantia young fruit, Cold Water, Kabha inducing foods should be avoided. Bean Fruit, Dried fish, Young Drumstick, Moongdhall, pre boiled rice, milk may be added and taken in the diet.

DISCUSSION

It is obvious that Mezhugu group of preparation plays very important role in the management of many chronic refractory human ailments. Rasagandhi mezhugu, Idivallathy mezhugu, Van mezhugu, Gendhi mezhugu Gunmakudori mezhugu, Nava uppu mezhugu, Kummatti mezhugu Maha veera mezhugu are familiar mezhugu preparations used since many years. Since most of the mezhugu are prepared with toxic raw drugs, their quality, safety and efficacy should be ascertained with modern parameters.

The vast knowledge of repository of these therapeutic preparations of these Mezhugu preparations, the confidentiality and therapeutic values are based on the real experiences of great Siddhars. In the current scenario, correct processing according to the tradition plays a most important part in validating their effectiveness. Characterization on structural and elemental basis using modern experiments and analysis to address the role of the raw materials used during the preparation, purification, nature of the intermediates, specific compound form at the end point as finished product, solubility, dose, duration, shelf life period and the particle size of the final drug should be studied in detail.

Many metal and mineral raw drugs are prepared both as pathangam, parpam, chenduram, kalangu, kattu, urukku and chunnams. A detailed in-vivo and in-vitro studies of mezhugu for their quality, efficacy other indications should be ascertained using modern parameters.

The sequential processes from stage I to Stage III were responsible for numerous changes which translate the toxic materials to medicines. Chemical nature of the mezhugu depends upon the purification methods, materials mixed, quantity, quality of heat and flame, type of fuel, duration of heat, periodicity of grinding, size of the particle and solubility, assimilation and absorption in the alimentary tract are some of important factors to be studied.

The remarkable features in the preparation of mezhugu are the fine grinding in a stone mortar using a stone pestle. The production of heat during purification and strong force during grinding plays significant role to transfer the toxic solid materials into gaseous state.

Literature survey revealed that the herbo mineral drug selected offers scope for systemic biochemical, phytochemical, pharmacological screening and clinical trial for ascertaining the efficacy of them. They have not yet been undertaken for scientific proof.

- The main ingredients of the drug Cinnabar, Corrosive sublimate, mercuric chloride and mercury are the major constituents of Pancha Sootham, which are specially patterned for siddha system of medicine.

- The other ingredients of the drug Sulphur, Copper sulphate and Arsenic trisulphide are commonly recommended for the treatment of infectious diseases.
- The remaining herbal drugs are recommended for pharyngeal infection, abscesses and mainly digestive disorders.

The information on the selected drug reveals that no substantial investigations have been carried out till and therefore, it provides scope for detailed systematic studies as regard to phytochemical, pharmacological profile and in-vivo, in-vitro studies.

Present day food habits and stressful life style makes human body to become low mineral density thus forming cell damage which leads to benign to malignant growths as per cytology theory. Our mineral assimilation becomes poor in the alimentary canal due to nil to lower intake of mineral salts. The decrease in intracellular assimilation and damage DNA prepare itself for spontaneous mutations.¹³ Mezhugu preparations are first choice in many chronic degenerative diseases to restore the cell viability and these drugs are helpful in cell damage and also in simultaneously normalizing trace elements assimilation in the body. These factors should be studied in scientific parameters to ascertain the reliability.

CONCLUSION

Mezhugu formulations are classified as a special group of medicaments in Siddha system of medicine. Many of these preparations are considered vital since they are standing indispensable for their fast assimilation and metallic origin. As the name suggested these formulations are semi-solid, soft and greasy in consistency and they are indicated for many chronic diseases. The special indications highlighted and observed among local health healers and traditional practitioners to explore the efficacy and toxicity of Kanakalinga karpura mezhugu. Present day Siddha physicians and scientific community should prepare many of these unexplored formulations like Mezhugu and investigate them with scientific parameters to reveal many ascertained drugs for present day refractory diseases like cancer, rheumatoid arthritis, thyroid disorders, bronchitis, benign growths, adenitis and swellings.

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