



Traits of Nilavagai chooranam compositions-A literature review

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Abstract:

Siddha medicine is an ancient traditional medical system in the world. The medicine widely uses herbal based drugs and also contains herbo-mineral, animal products-based medicines. For the preparation of herbo-mineral, animal products-based drugs, herbs perform in major role. One of the Siddha herbal medicines, Nilavagai chooranam is used to treat various GIT illness such as malabantham (constipation), vanthi (Vomiting), gunmam (Peptic ulcer) and etc. The method of preparation is mentioned in Agathiyar vaiththiya rathina surukkam-360. The essential step was to develop the information survey of ingredients of the drug. An extensive review was distinguished from Siddha literatures and scientific resources such as peer- reviewed journals, thesis and etc. The present review provides an upgraded data almost of ingredients of Nilavagai chooranam into advance research aiming to validation of the drug as therapeutic value and fortifies the ethnopharmacology study. In this way, scientific validation is the most perfect way to create the development of herbal drugs.

Keywords: Medicinal Plants, Nilavagai chooranam, Pharmacolical activity, Review, Siddha properties.

Introduction:

The Siddha system is based on a combination of ancient medical practices and spiritual discipline. The world health organization said that the sum total of the knowledge, skill and practice-based theories, beliefs and experiences indigenous to different cultures, used in the maintenance of health as well as in the prevention, diagnosis, treatment of the physical and mental illness. In the world 80% of the total population is using herbal medicines. The chooranam preparation is a mixture of powder herbs and or minerals used in Siddha medicines. It is made by grinding single ingredient or numerous of ingredients such as der root, rhizome, bark, wood, flower, resin, leaf, seed, fruit and whole plant also (1).

Information of medicinal plants includes plant growth, taste, description, therapeutic properties, employments and variables. Hence, the broad way of information as it were will demonstrate the restorative esteem of the herbal drugs. One of the Siddha herbal formulations, Nilavagai chooranam has utilized for different illness. This drug, comprise of 5 components.

This audit will give data about drug components description, Siddha properties, morphology and advanced pharmacological thinks about statistical analysis. Through this, the drug's therapeutic values are well caught on and assist inquire about think about ought to be made to make strides herbal medicines as scientific validation.

Materials and Methods:

- **Study design:**
Descriptive study
- **Study place:**
Government Siddha Medical college, Chennai-106.

- **Data collection:**

The method of preparation of Nilavagai chooranam is mentioned in Siddha literature (2). Data for review was undertaken from scientific sources like Pubmed, Science Direct, Google scholar, original articles published in peer- reviewed journals.

The drug component information like species, vernacular names, morphology, Siddha properties were collected from Siddha text books (3,4). Modern analytical data such as phytochemical, pharmacological are collected from research articles.

Result and Discussion:

- **Scientific and Conversional names and Family of the ingredients (3):**

Among five ingredients of chooranam all were identified as herbs. The plant's botanical, conversional name and family is summarized in Table no.1. Botanical names are used for unique identification of plants worldwide. It enables the identification of a plant irrespective of vernacular names, which vary from one language to another or even from within the same country. This naming enables people worldwide to refer to a specific plant clearly and concisely (15). Thus, the table no.1 clearly shows specific plant identification.

Table no.1: Identification of plants by names

S.no	Botanical name	Family (4)	Tamil name	English Name	Sanskrit name
1.	<i>Cassia senna</i>	Fabaceae	Nilavagai	Senna leaf	Swarnapati
2.	<i>Piper nigrum</i>	Piperaceae	Milagu	Black pepper	Maricha
3.	<i>Trachyspermum ammi</i>	Apiaceae	Omam	Aprum involucreatum	Ajwan
4.	<i>Zingiber officinale</i>	Zingiberaceae	Sukku	Dried ginger	Nagaram
5.	<i>Embelia ribes</i>	Primulaceae	Vaividangam	Embelia	Vidanga

- **Native, Morphology and Parts Used (3):**

All the over plants are local to India. Among these, the ginger developed in Samaikka country is considered to be best (4), whereas the Senna developed in Tirunelveli is considered to be most elevated quality (3). Pepper is developed in South India and Embelia is developed in central and lower Himalayas.

Environment of the plants shift one another. Herbs are those plants whose stems are delicate green and perishable. Plants with powerless stems that cannot stand upright but promptly climb up the tree or another mechanical thing are called climbers. Rhizomes develop underground or aboveground. From above five plants, two plants (*Cassia senna*, *Trachyspermum ammi*) are herb in nature, two plants (*Piper nigrum*, *Embelia ribes*) are climber in nature while Dried Ginger rhizome in nature.

Likewise, in utilized parts, three plants of seeds (Embelia, Black pepper, Aprum involucreatum), One dried rhizome and whole plant of senna is used in Nilavagai chooranam (Fig no.2).

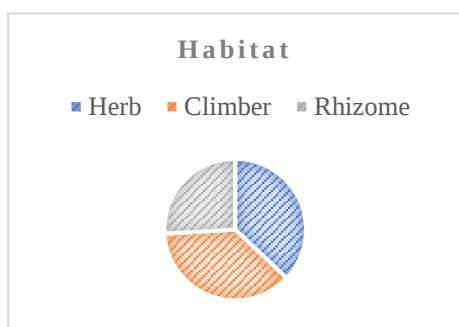


Fig.no:1

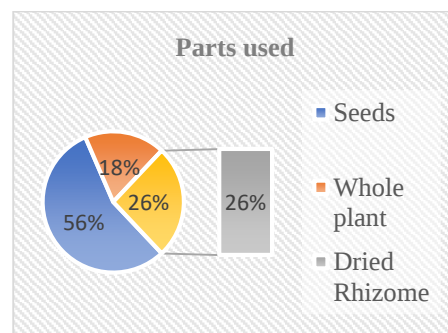


Fig.no:2

• Siddha properties of the drug ingredients:

In Siddha literature, every single plant or even parts of the plant have different taste, potency and class. Taste plays a major role in Siddha medicine. The dynamics of Siddha preparations are based on Six taste parameters such as sweet, sour, salty, pungent, bitter and astringent. Potency is described as an active constituent of the drug which was two types, hot and cold potency. Class is said to be the post absorption which also is considered to the drug after absorption which also being an important aspect of Siddha medicine (1). Table no.2 reveals the taste, potency and class of the ingredients.

Table no. 2: Siddha properties of Ingredients

S.no	Drug name	Taste	Potency	Class
1.	Senna	Bitter	Hot	Pungent
2.	Pepper	Bitter, Pungent	Hot	Pungent
3.	Dried ginger	Pungent	Hot	Pungent
4.	Ajwan	Pungent	Hot	Pungent
5.	Embelia	Pungent	Hot	Pungent

• Phytochemical components of the ingredients:

Phytoconstituents present in various parts of the plant. Phytochemicals are the chemicals that are present naturally in plants, which consist of phenol, flavonoids, alkaloids, terpenoids, tannins, saponins, glycosides and etc. They are enhancing wellness and reduce health risk factor. Their use is gradually increasing due to their effectiveness (16).

The Senna contains, flavonoids, anthrone, tannin and specially anthroquinone glycosides and etc (5). The black pepper consists, tannin, alkaloid, flavonoids and cardiac glycosides and etc (7). Ajwan seeds have carbohydrate, protein, fat, glycoside, tannin, saponins and etc (10). The Dried ginger containing phytochemicals such as flavonoids, tannin, Vitamin C, polyphenols and etc (11). The seeds of the embelia have flavonoids, tannins, alkaloids, phenols, saponins and etc (14). Figure no. 3 shows the percentage of phytochemicals in the ingredients of Nilavagai chooranam.

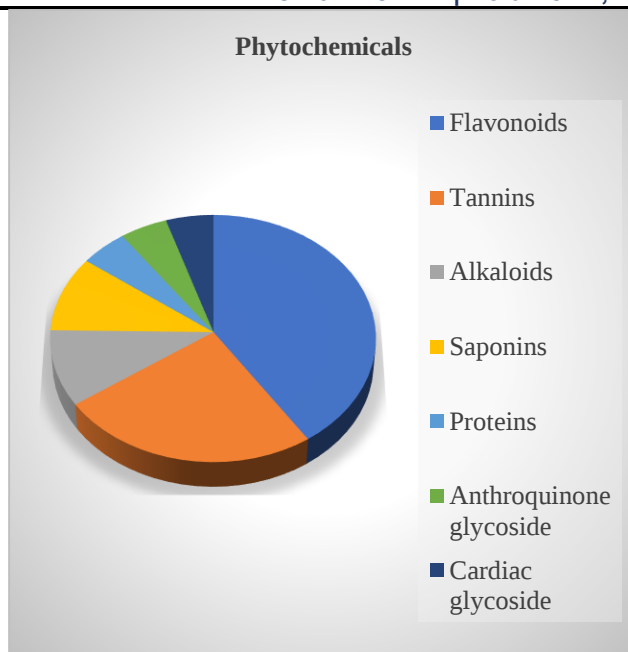


Fig.no:3

• Pharmacological properties of ingredients (5-13):

The Pharmacological action is the function of the drug which mentions the outcome effect of the drug (1). The mechanism of action refers to the specific biochemical interaction through which a drug substance produces its pharmacological effect. Each ingredient has more than one action. Based on review, pharmacological actions like 15% (3 plants) of hepatoprotective activity and anti-fungal activity, 20% (4 plants) of Anti-bacterial activity and anti-oxidant activity, 10% (2 plants) of insecticidal and analgesic activity and more than 5% have anti-ulcer activity, anti-emetic, anti asthmatic, anti-inflammatory, anti-cancer, anti proliferative activity present in these ingredients (Fig no.4).

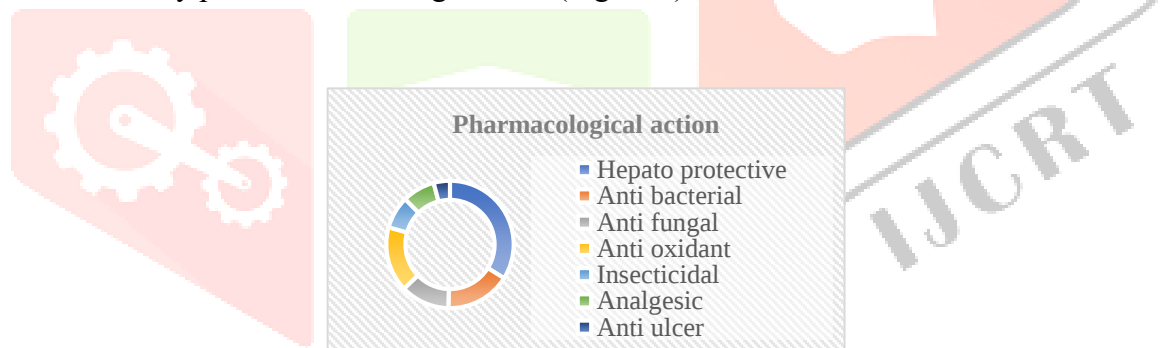


Fig.No:4

Conclusion:

From the above literature review, each ingredient has phytochemicals, pharmacological actions and used in various traditional practices. Through this, Nilavagai chooranam have medicinal values. Though, the drug should be analyzed for advanced research such as Standardization parameters, toxicity and clinical trial phases. This preliminary documentary evidences are helpful for upcoming researches.

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Reference:

1. Mufaza M, Nisra H, Kalaichelvi S, Vinotha S. Thaalisaipaththiri Chooranam (Poly Herbal Formulation) in Siddha Medicine-A literature review.
2. Agathiyar vaithiya rathina surukkam-360,2009. B. Rathina nayakar and sons, Chennai-79.
3. Murugesu muthaliyar K.S, Siddha materia medica (Gunapadam part I), Department of Indian medicine and Homeopathy, Chennai, 2013.
4. Somasundaram S. Maruthuva thavaviyal.Part – I Elangoven pathipagam, Palayamkottai, 2009.
5. Singh S, Singh SK, Yadav A. A review on Cassia species: Pharmacological, traditional and medicinal aspects in various countries. American Journal of Phytomedicine and Clinical Therapeutics. 2013 Jun 30;1(3):291-312.
6. Kalsoom A, Altaf A, Jilani MI, Sattar H, Maqbool T, Muhammad T. In vitro antiproliferative potential of Cassia angustifolia extracts on HepG2 cells to combat liver cancer. International Journal of Applied and Experimental Biology. 2023 Nov 2.
7. Ganesh P, Kumar RS, Saranraj P. Phytochemical analysis and antibacterial activity of Pepper (*Piper nigrum* L.) against some human pathogens. Central European Journal of Experimental Biology. 2014;3(2):36-41.
8. Siddiqui BS, Gulzar T, Mahmood A, Begum S, Khan B, Rasheed M, Afshan F, Tariq RM. Phytochemical studies on the seed extract of *Piper nigrum* Linn. Natural product research. 2005 Oct 1;19(7):703-12.
9. Saleem A, Naureen I, Naeem M, Tasleem G, Ahmed H, Farooq U. Therapeutic role of *Piper Nigrum* L (Black Pepper) and pharmacological activities. Scholars International Journal of Biochemistry. 2022;5(1):15-21.
10. Chahal KK, Dhaliwal K, Kumar A, Kataria D, Singla N. Chemical composition of *Trachyspermum ammi* L. and its biological properties: A review. Journal of Pharmacognosy and Phytochemistry. 2017;6(3):131-40.
11. Prakash J. Chemical composition and antioxidant properties of ginger root (*Zingiber officinale*). Journal of Medicinal Plants Research. 2010 Dec 18;4(24):2674-9.
12. Ali BH, Blunden G, Tanira MO, Nemmar A. Some phytochemical, pharmacological and toxicological properties of ginger (*Zingiber officinale* Roscoe): a review of recent research. Food and chemical Toxicology. 2008 Feb 1;46(2):409-20.
13. Ambati S, Jyothi V, Jyothi VA. Pharmacological, pharmacognostic and phytochemical review of *Embelia ribes*. International Journal of Pharmacy and Technology. 2010;2(4):525-39.
14. Sushma D, Ghatuay SK, Satkar P, Jain PK, Geeta P. Phytochemical screening and in vivo anti-inflammatory activity of hydroalcoholic extract of *Embelia ribes* Burm. F. Journal of Drug Delivery and Therapeutics. 2019;9(4-s):386-9.
15. https://www.eposrl.com/en/magazine_pt/scientific-naming-of-plants-origin-and-importance/#:~:text=Formal%20botanical%20names%20are%20used,after%20the%20taxonomic%20classification%20process.
16. Sabina Wangui Wachira, Chapter 33 - Factors to consider in development of nutraceutical and dietary supplements☆☆In the previous edition, P.K. Mukherjee, R.K. Harwansh, S. Bahadur, V. Duraipandiyan, and N.A. Al-Dhabi contributed to this chapter.,Editor(s): Simone Badal McCreath, Yuri N. Clement, Pharmacognosy (Second Edition), Academic Press,2024, Pages 757-768, ISBN 9780443186578, <https://doi.org/10.1016/B978-0-443-18657-8.00032-3>,