

A Review on Validation of Siddha Medicine Chooranas Used for Various Ailments

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ABSTRACT: The traditional systems of medicine have become more popular all over the world because of its curative property, less toxic and minimum side effects. Rheumatoid arthritis is characterized by inflammation of joints, surrounding tissues and it is also chronic disease. The majority of the patient with rheumatoid arthritis have switch over to Siddha medicine because of little side effects. The present work reviews bioactive principle and chemical components present in different chooranas reported by various authors. Many other solutions to biological activities in humans were also been identified using Chooranas.

KEYWORDS: Chooranas, chemical components, biological activity.

INTRODUCTION:

Traditional systems of medicine contain the bioactive components from natural sources and most of them are associated with food habits. The Siddha system of medicine is a traditional medical system that uses a scientific and holistic approach to provide preventive, promotive, curative, rejuvenating, and rehabilitative health care. Siddha is an ancient Indian medical system that focuses on treating the mind, body, and soul. But the Siddha systems of medicine lack standardization. So, there is a need to develop a standardization technique.

Siddha is one of the ancient traditional medicinal systems of India. Siddha system is a unique system which is highly incorporated with Science and Spirituality. There are lot of formulations with wonderful scientific secrets especially in the field of chemistry. (Rajamaheswari K. et al, 2016) Siddha system of medicine is one among the great heritages of India especially in Tamilnadu (V.N. Meena devi et al, 2010).

Herbs, minerals and products of animal origin are basic raw materials of the Siddha system. Siddha System of medicine caters a totality of herbs, and is unique in exhibiting fewer side effects. Siddha medicine has a better answer for curing refractive diseases like arthritis, cancer, bronchial asthma, etc. (Eugene Wilson et al., 2007)

Standardization of herbal drugs is necessary but is difficult because they are usually mixtures of many constituents and the active principle in most cases is unknown. In the global perspective, there is a shift towards the use of medicine of herbal origin, as the dangers and the shortcoming of modern medicine are getting more apparent.

Nowadays medicinal plants and herbal formulations are predominantly used due to their less side effects and the presence of enormous level of active ingredients. But adulteration and misidentification of the herbs may lead to deleterious effects in pharmaceutical industry which paves the way for the standardization of herbal drug. (Ramakrishnan, et al. 2015)

Though herbal products have become increasingly popular throughout the world, one of the

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impediments in its acceptance is the lack of standard quality control profile. Due to the complex nature and inherent variability of the constituents of plant-based drugs, it is difficult to establish quality control parameter. Hence for herbal drugs and products, standardization should encompass the entire field of study from cultivation of medicinal plant to its clinical application.

REVIEW OF LITERATURE

Chooranam is a thathu sarakku (i.e it is the mixture of minerals). Most of the Siddha literatures deal with Chooranam, which plays an important role in curing the diseases. Almost all the Siddhars in their works have stated the information about Chooranam, purification of Chooranam and its indication, for the usage with the adjuvant. Some of the Siddha literatures have mentioned about the preparation of Chooranam vessel for the prolongation of life.

- **Sattanathan Iyswarya et al., (2023)** Anti-microbial profiling of the siddha formulation **Pancha Karpa Chooranam (PKC)** was evaluated by disc diffusion method. It was observed from the study that the test drug **PKC** exhibit significant antimicrobial activity against all the tested organisms, *Escherichia coli* (15–23 mm), *Staphylococcus aureus* (13–19 mm), *B. subtilis* (12–19 mm), *Salmonella typhi* (16–23 mm), and *Candida albicans* (17–21 mm) that were higher than the respective standards (Streptomycin and Ketacanazole).
- **S. Selva Sivagami et al., (2024)** The identification of bioactive molecules and the quality standardization studies of **Nilaavarai Chooranam (NVC)** were carried out. This choornam had the potential of Absorption, Digestion, Metabolism, and Excretion (ADME) which is essential for proper health maintenance. Major constituents detected in this formulation are piperine and gingerol.
- **Gaddam Dayanand Reddy et al., (2024)** studied the Hypolipidemic Potential of Polyherbal Siddha formulation **D5 Chooranam**. Found to be effective in the management of hyperlipidemia at three dose Levels 250, 500, 750 mg/kg as it was able to decrease the TG, LDL, VLDL, and increase the HDL levels. D5 Chooranam at 3 dose levels didn't show any adverse effects in hyperlipidemic rats. Hence, the chemical constituents of the test drug might help in preventing hyperlipidemic complications and may serve as an alternative in management of hyperlipidemia.
- **P. Parvathy et al., (2024)** Molecular Docking Studies of Siddha Herbal formulations **Keezharnelli Choornam and Kalarchi Choornam** on CYP-17 α -Hydroxylase for the Treatment of Polycystic Ovarian Syndrome were done. As a result, Phytochemicals in Kalarchi and Keezharnelli choornam were seen to inhibit the CYP17 hydroxylase enzyme, which is crucial for steroid hormone synthesis. Over expression of CYP17 hydroxylase leads to hyper androgenism in Polycystic Ovary Syndrome (PCOS). Inhibiting CYP17 hydroxylase activity may reduce ovarian androgen synthesis.
- **Aishwarya S. et al., (2024)** analyzed IN-SILICO molecular docking studies of siddha herbal formulation **Mahalavangathi Chooranam** for its anti – inflammatory activity. Total of 11 bioactive lead compounds were retrieved from the herbs present in the siddha formulation Mahalavangathi Chooranam. From reported data of the Herb, the phytochemicals such as β -sitosterol, Nerolidol, Piperine, Gingerenone-A, Withaferin A and Swertisin possess maximum of three to six interactions with the Core active amino

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acid residues present on the target IL6 (Interleukin 6) which makes it to exert a promising anti-inflammatory activity.

- **P.P. Sethumathi et al., (2021)** evaluated in vitro antioxidant and antimicrobial activity of polyherbal formulation of **Thirikadugu chooranam (TC) and Parangipattai chooranam (PC)**. Among the two investigated polyherbal formulations TC showed highest DPPH radical scavenging power than PC. TC showed the IC₅₀ value 2280 µg/ml, whereas PC showed the IC₅₀ value of 2940 µg/ml. The maximum zone of inhibition for methanol extract of PC for *Aspergillus niger* and *Candida albicans* was found to be 4.45 mm and 5.31 mm respectively at a concentration of 1000 µg/ml whereas in TC, 2.2 mm and 3.2 mm zone of inhibition at 1000 µg/ml concentration is noted. There is no inhibition observed at 250 and 500 µg/ml concentrations. The zone of inhibition of PC was found to be maximum than TC which shows the antimicrobial activity of TC is lower than PC.
- **Anitha Kalaivani M et al., (2023)** standardized **Gowthamar Chooranam**. It was concluded that siddha polyherbal formulations Gowthamar chooranam having biologically active components may help in management of Swasakasam (Bronchial asthma).
- **C. B. S. Bharath Christian (2023)** evaluated in – vivo anti - inflammatory activity of mono herbal Siddha formulation of **Kanduparangi Chooranam**. The results of this study showed that the monoherbal Siddha formulation Kanduparangi Chooranam, exhibited significant paw edema volume inhibition, reduction in pleural exudates level and decreased leucocyte migration count in Wistar Albino rats. The results clearly showed the anti-inflammatory properties of the test drug.
- **Kiruthika Saravanan et al., (2023)** standardized **Amukkara Chooranam- Siddha drug**. Polyherbal Siddha medicine, named Amukkara choornam is composed of herbs and spices. It is an anti-Arthritic active compound prescribed for diseases like **rheumatoid arthritis**, kapharoga, splenomegaly, Vataroga, hiccup, tuberculosis, anemia, Leucorrhoea. It aids in secreting bile for better Digestion and kapha balance. Apigenin and Chrysoeriol have anti-inflammatory activity, thus validating the anti-rheumatoid arthritis activity of the choornam.
- **Shamshalniha. S et al., (2023)** reported that the Siddha polyherbal formulation **Sevviyadhi chooranam** has potent anti-inflammatory activity without any adverse effects. This activity mainly due to the presence of phytochemicals of herbal drugs present in Sevviyadhi chooranam which has an inhibitory action over pro-inflammatory agents such as prostaglandins, serotonin and thromboxanes. By this the current study concluded and ensured the anti-inflammatory activity of the Siddha polyherbal formulation Sevviyadhi chooranam. Hence, it will be a promising drug of choice for the management and treatment of sinusitis and various other inflammatory diseases.
- **J. Jayabarathi et al., (2023)** reported that the siddha medicine **Pasuneer Kadukkai Chooranam (PKC)** exhibit strong anti-inflammatory action in carrageenan-induced rat paw edoema, which is equivalent to indomethacin. This was determined by comparing the drug's effect on the edoema to that of indomethacin. It is possible that the anti-inflammatory mechanism of PKC is connected to the lowering of inflammatory cytokines, which might result in a percentage inhibition given by PKC towards the

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- production of inflammation by carrageenan.
- **Neethu P. et al., (2024)** studied anti-inflammatory effect of siddha herbal drug **Azhavanam Verpattai Chooranam** using in silico model. Based on the results of the computational analysis it was concluded that all the bio-active compound's like Lawsone, Apigenin and Scopoletin reveals significant binding affinity against the target cytokine IL6 by interacting with active amino acid present on the active site thereby it was concluded that these compounds may exerts promising anti-inflammatory activity.
 - **Rajalakshmi et al., (2017)** studied the antioxidant and anti-inflammatory activities of Selected Siddha polyherbal formulations such as **Amukkara choornam, Thirikadugu Chooranam, Eladi choornam** and **Thiripala choornam**. Thiripala choornam has six folds higher Level of total phenolic content (1248 mf GAE/100 g) when compared to other Formulations (190.42 – 199.78 mg GAE/100 g). Similarly, Thiripala choornam exhibited Promising antioxidant activity in terms of radical scavenging potential against DPPH (IC-50: 156 mg/L), superoxide (IC-50: 2303 mg/L), hydrogen peroxide (IC-50: 294 mg/L) And hydroxyl radical (IC-50: 587 mg/L) and anti-inflammatory activity (IC-50: 24 mg/L). From the study it was found that Thiripala choornam exhibited high antioxidant and anti-Inflammatory potential and thus could be used as more effective analgesic formulation.

CONCLUSION:

In the rising countries, increased cost of medicine as well as their side effects has become a great task when the public health is concerned. The scientific advancement carries with it the improvement in polyherbal formulations, through the study of various phytoconstituents and discovery of useful herbs combinations which work synergistically to produce desirable effect. Although polyherbal formulation is commonly used in many parts of the world, but scientifically it has not been explored. PHFs provide treatment of diseases in a holistic approach. Traditional healers and herbalists in Asia are using large numbers of anti-arthritis medicinal plants. India in the leading country in both ethno medicinal and pharmacological studies related with arthritis. Most of the anti-arthritis herbal formulations are used in the form of decoctions and poultices. Moreover, safety evaluations such as toxicological studies have not performed. This review reveals the diversity of polyherbal formulations which have been using for long time traditionally as well as dosage form for the treatment of arthritis.

REFERENCE:

- Iyswarya, S., Meena, S., Visweswaran, S., & Muthukumar, N. J. (2023). Revealing Anti-Microbial Potential of Traditional Siddha Formulation Pancha Karpa Chooranam against Infectious Pathogens. *Pharmacognosy Research*, 15(2).
- Sivagami, S. S., Swetha, S. A., Swetha, V., Ravichandran, N., Lavanya, R., Rajalakshmi, P., & Brindha, P. (2024). Identification of Bioactive Molecules in Traditional Siddha Formulation “Nilaavarai Chooranam”. *Journal of Natural Remedies*, 1051-1060.
- Reddy, G. D., Ganesan, R., Jayavaram, M., Krishnamoorthy, B., & Ahamed, S. (2024). Hyperlipidemic Potential of Polyherbal Siddha Formulation D5 Chooranam. *Pharmacognosy Research*, 16(2).
- Parvathy, P., Lekha, G. S., & Kanagarajan, A. (2024). Molecular Docking Studies of

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Siddha Herbal Formulations Keezharnelli Chooranam and Kalarchi Chooranam CYP-17 α -Hydroxylase for the Treatment of Polycystic Ovarian Syndrome. Journal of Natural Remedies, 2819-2827.

- Aishwarya, S., Navasiddhan, A. T., Vignesh, K., Thennarasi, M., & Sundararajan, S. (2024). In-Silico Molecular Docking Studies Of Siddha Herbal Formulation Mahalavangathi Chooranam For Its Anti-Inflammatory Activity. European Journal of Biomedical, 11(10), 232-246.
- Sethumathi, P. P., Manjuparkavi, K., Lalitha, V., Sivakumar, T., Menaka, M., Jayanthi, A., & Kumar, B. A. (2021). Evaluation of in vitro antioxidant and antimicrobial activity of polyherbal formulation of Thirikadugu chooranam and Parangipattai chooranam. Ann. Phytomed, 10(2), 169-174.
- Anitha Kalaivani, M., Shamshalniha, S., & Anbu, N. (2023). Standardization of Gowthamar chooranam–A Polyherbal Siddha Formulations in the Management of Swasakasam (Bronchial Asthma). Journal of Pharmaceutical Research International, 35(25), 47-54.
- Christian, C. B. Evaluation Of In-Vivo Anti-Inflammatory Activity Of Mono Herbal Siddha Formulation Kanduparangi Chooranam (Pygmaeopremna Herbacea-Root Powder) In Carrageenan-Induced Paw Edema & Pleurisy In Wistar Albino Rats.
- Saravanan, K., Venugopal, S., & Shilpa, R. Standardization Of Amukkara Chooranam-Siddha Drug.
- Shamshalniha, S., & Anbu, N. Anti-Inflammatory Activity Of Siddha Polyherbal Formulation Sevviyadhi Chooranam On Carrageenan Induced Paw Edema In Wistar Albino Rats.
- Jayabarathi, J., Amaravathi, S., Menaka, R., Chitra, U., & Anbu, N. (2023). Syst Preclinical Investigation Of Anti-Inflammatory Potential Of Siddha Drug Pasuneer Kadukkai Chooranam Using Carageenan Induced Paw Oedema Model In Rats. Int J Trans Res Ind Med, 5(2), 23-28.
- Neethu, P., Hemavathi, P., Vignesh, K., KPS, R. R., & Sundararajan, S. (2024). Anti Inflammatory Effect Of Siddha Herbal Drug Azhavanam Verpattai Chooranam Using In Silico Model. A Computational Study To Predict Its Efficacy In Treating Menorrhagia. European Journal of Biomedical, 11(10), 247-254.

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