Review of Kudineer used in Siddha system of medicine

Shree Devi M S[1*], Sathiyarajeswaran Parameswaran[2]

1* Research officer (S), Siddha Central Research Institute, Chennai-106.

2. Asst.Director, Sci –II & I/c, Siddha Central Research Institute, Chennai – 106.

ABSTRACT

Introduction:

Siddha medicine has 32 internal and 32 external drugs in Treatment. Among all the internal medicines Kudineers (Decoction) used in Siddha play a very important role in Public health. Recent examples were Nilavembu kudineer in prevention of Chickunguniya, dengue and Kaphasura kudineer in swine flu. Among the several Kudineer more than 10 potent Kudineers available in prevention of both Communicable and Non communicable disease in Siddha. This review attempts to describe the kudineers, their usage, dosage and research behind them.

Keywords:

Siddha medicine, Kudineer, Nilavembu kudineer, Kabhasura kudineer.

Corresponding author:

Shree Devi M S, Research Officer (Siddha), SCRI, Chennai.

shreemd@gmail.com / +91 94430 56180.

Introduction:

Siddha pharmaceutics classifies its major formulation in two major headings 32 internal and 32 external drugs. The earliest form of internal drugs are decoctions, juices and chooranams. These drugs were instantly prepared and dispensed immediately after preparation as they have limited shelf life. But, the efficacy of the decoction are the real strength of the Siddha medicines, there is also a justification laid down by Siddhars to use phyto sources as primary line of treatment and depend on herbo-mineral if these primary sources fail.

"வேர்பாரு தழைபாரு மிஞ்சினக் கால்
மெல்லப் மெல்லப் பற்பப் செந்தூரம் பாரே"

Vērpāru taḻaipāru miñciṉak kāl
mella mella paṟpa centūram pārē"

The usage of kudineer as a prophylaxis in dengue and chikungunya has been promoted in large by state health public department of Tamilnadu. This has further more increased the interest of researchers to focus on kudineers mentioned in Siddha. This paper attempts to a systematic review with which the happenings in research with kudineer can be carried out.

Materials and Methods:

Literature searches were conducted to identify all review papers of Kudineers in Siddha medicine. The following databases were used: CINAHL, Pubmed, Medline, Proquest, and "Evidence Based Medicine Reviews: Google scholar, ACP Journal Club, DARE, and CCTR". The two terms "Kudineer" and "Siddha medicine" were linked together using the Boolean operator "AND" in order to search articles containing both terms. In addition, a search containing the terms "Kudineer AND [Siddha medicine OR Decoction]" was conducted. The reference lists of located articles were also searched for possible publications.

Kudineer used in Communicable diseases

- NILAVEMBUKUDINEER
- KABHA SURA KUDINEER
- PITTA SURA KUDINEER
- NOCHI ILAI KUDINEER

Kudineer used in Non - Communicable diseases

- MARUDHAM PATTAI KUDINEER
- AVARAI KUDINEER
- AVURI KUDINEER
- KARUNKALI KUDINEER
- SIRUPEELLAI SAMOOLA KUDINEER
- POOVARSAM PATTAI KUDINEER

Nilavembu Kudineer in Viral Infections [1]

Siddha physicians prescribe many drugs to bring down several viral infections such as swine flu, chikungunya and dengue nowadays. The polyherbal decoction *Nilavembu Kudineer* (NK) is a familiar one in this series. This drug is administered for all age groups and observed by nil adverse effects. Tamil speaking people are well known of this drug irrespective of their literacy, knowledge about medicine etc. Many researchers rivet over this drug because of its rescuing nature from various microbial infections. Here, an attempt has been made to summarize the explored ethno pharmacological activities of the ingredients in order to strengthen the scientific facts favouring this drug. Nilavembu kudineer in the dilution of 2.5 ml full inhibition was observed. But in dilution of 100µl to 2 ml growth was observed. This study indicates both the drugs are having anti-leptospiral activity.

Case Series [2]

Case series were conducted at the department of Siddha medicine in collaboration with the general medicine department of MMC Hospital, Chennai, during the November-December months 2013 of Dengue fever. Clinically and serologically confirmed cases of dengue fever and who are willing to participate in the study were included. Data was analysed with graph pad prism version-5.The study conclude that on administration of siddha herbal formulation (Nilavembu kudineer) fever associated with chills and rigors, body aches, bone pain, headache, myalgia, rash, low platelet count, decreased TLC, raised serum ALT and Haemorrhagic manifestations are improved satisfactory in suspected dengue virus infection in 24 cases.

Case-control study [3]

Prospective case-control with Retrospective data collection study was performed. Patients reported at OPD was included as study subjects. Inclusion Criteria - Fever patients with clinical symptoms of viral fever and / or Thrombocytopenia as "Cases". Patients without symptoms of viral fever but age-sex matched with case-subject as "Controls" Patients without symptoms of viral fever but age-sex matched with case-subject as "Controls". A person who has consumed minimum 5 days of Nilavembu Kudineer was considered as Nilavembu consumed person. Exclusion Criteria - Malarial fever, Enteric fever, Filarial fever, Sepsis, Leptospirosis etc. Sample size was 176 cases and 352 controls. Study period carried for 4 months. Consumption of Nilavembu Kudineer as a prophylactic measure prevents significantly the occurrence of viral fever in all age groups invariably.

Nochi Ilai Kudineer in Malaria [4]

In Siddha materia medica, medicinal plant division Nochi ilai kudineer is indicated for murai suram which is intermittent fever that occurs in malaria. This classical text is reviewed for its antimalarial activity which eventually has the property of curing intermittent fever. Various phytochemical constituents present in leaves of *Vitex negundo* Linn are potent antipyretic agents. Against these backdrops, this review was attempted to reveal the hidden treasure of Siddha literature regarding Nochi ilai kudineer for malaria.

Pitta sura Kudineer in Fever, Pain and Inflammation [5]

The traditional use of this formulation in the treatment of various types of pain and inflammation. The ethanolic extract of the aerial parts and roots of Pitta sura kudineer formulation was subjected to preliminary phytochemical screening, acute toxicity and anti-inflammatory studies.The result of acute toxicity studies (2000 mg/kg b.w.) showed no alteration in the general behaviour of animals and showed no mortality and found to be safe. Based on the acute toxicity study, two doses

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were fixed to be 200 mg/kg and 400 mg/kg b.w. and used for further studies. Anti-inflammatory study of ethanolic extract was investigated at doses 200 mg/kg and 400 mg/kg b.w. by using carrageenan-induced paw edema in vivo screening method.

Maruthampattai Kudineer in Diabetes [6]

"Maruthampattai Kudineer" evidence from Classical text "Sarabenthira Vaithiya Muraigal-Neerizhivu Sigitchai". The In-vitro & In-vivo studies shows potent anti-diabetic activity.Bark of *Terminalia arjuna* shows anti-diabetic activity.

Aavirai Kudineer in Diabetes [7]

Aavirai kudineer is an herbal decoction of seven botanical drug cited in Gunapadam a Tamil Siddha medical text. The diabetic efficacy of this formulation was evaluated using Alloxan induced diabetic and normal rats. Glucose tolerance was observed within 1 hr in AK treated rats (10ml/kg body) as compared to control. A significant decrease in the severe hyperglycemia characteristic of alloxan diabetes was noted after 15days of AK treatment. Further AK reversed the elevated urea, creatinine, cholesterol, and decreased protein values to near normal levels. Assay of glycogen content and chief carbohydrate metabolizing enzymes viz hexokinase glucose 6 phosphatase and fructose 1,6 di phosphate in the liver of diabetic and AK treated diabetic rats clearly ascertains the hypoglycemic efficacy of this formulation.

Avuri Kudineer in Renal damage [8]

The Avuri kudineer [Decoction of Indigofera tinctoria] made of indigo leaves AKL, the Avuri kudineer made of indigo root and leaves.Cisplatin is widely used chemotherapeutic agent for the treatment of several human malignancies. The efficacy is dose dependent, but the significant risk of nephrotoxicity frequently inhibits the use of higher doses to maximize its anti-neoplastic effects. AKRL was evaluated for nephroprotective activity in Cisplatin induced renal damage in rats. Nephrotoxicity was induced in wistar albino rats by intra-peritoneal administration of Cisplatin 5mg/kg. Effect of concurrent administration of AKL and AKRL Avuri kudineer at a dose of 500 mg/kg and 1000mg/kg were given for respective animal groups by oral route was determined using serum creatinine and blood urea and change in body weight as indicators of kidney damage. The decoctions significantly decreased the cisplatin induced nephrotoxicity. Remarkable changes were observed in body weight, serum creatinine and urea levels. It was observed that the Avuri kudineer [AKRL] significantly protected the kidneys from injury than the Avuri kudineer [AKL].

Karunkali ver Kudineer in Analgesia [9]

Karunkali (*Acacia catechu*) is an herb described in Gunapadam mooligai vaguppu. It is therapeutically quoted for Diabetes (Mathumegam) and Thimiru (Neuritis). Diabetic neuropathy, equated

to Vathakarshanam in Siddha is one of the complications of diabetes which cripple the patients. The present study was aimed at evaluation of the central and peripheral acting analgesic activity of total aqueous extract of root of Acacia catechu (karunkali ver – a Siddha Drug) in mice by Eddy's hot plate method and Writhing test.The results of hot plate model indicated that the total aqueous extract of karunkali ver Kudineer (kvk) shows a significant increase ($p< 0.01$) in reaction time at a 3, 4 and 6 hours comparable to the reference drug Pentazocin but lesser ($p< 0.05$) at 2 hour.The tail immersion and hot plate test reveal that this has high analgesic activity. The bio chemical parameters never show any untoward changes during study period. Karunkaliver Kudineer showed maximum analgesic effect after 90min of administration.

Sirupeelai samoola Kudineer in Urolithiasis [10]

Sirupeellai samoola kudineer (SK), a polyherbal decoction, has been used in Siddha system of medicine for the management of Urolithiasis. In the acute toxicity study, SK did not produce any toxic signs at a dose level of 50 ml/kg b.wt/p.o. Three doses of SK (4.5, 9.0, 18.0 ml/kg b.wt) were administered and observed for various behavioural, physiological, biochemical, and haematological changes for 28 days. In the subacute toxicity study. Low and mid dose of SK (4.5 and 9.0 ml/kg b.wt) did not exhibit any significant physiological and haematological alterations. Whereas, high dose (18.0 ml/kg bw) treatment exhibited significant changes in creatinine, gamma glutamyl transferase (GGT) and acid phosphatase (ACP) levels in serum. Further, histopathological examinations of brain, heart, liver, kidney and sex organs revealed normal architecture signifying no morphological changes up to a dose of 9.0 ml/kg. It can be concluded that Sirupeellai samoola kudineer is safe and non-toxic up to 9.0 ml/kg for 28 days in experimental rats

Pidangunari Kudineer in Liver protection [11]

'Pidangunaari kudineer' comprised of three herbal ingredients such as leaves of Premna tomentosa, pericarp of ripe fruits of Terminalia chebula, rhizomes of Curcuma longa. This formulation is very effective against hepatitis in the clinical practice. These included studies on the antioxidant, anti-inflammatory, antihepatoxicity induced by acetaminophen and also phytocompounds were identified to justify the safety and hepatoprotective efficacy. Ethnic background of these herbs results liver protection make Pidangunaari Kudineer for further screening for hepatoprotection.

CONCLUSION

The past two decades have recorded non caffeinated herbal tea consumptions for maintenance of health. If served in palatable manner all decoctions can be used as an herbal tea like the traditional

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Sukku, Malli coffee which maintain lipid levels. The tea medication started from the Bodhidharmar is the pathway to accomplishment which may be equated to siddhi. Kudineers if they substitute hot beverages, a healthy globe can attain.

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