Role of Kabasura Kudineer Against Covid-19 - A Review

BATHALA ANANYA¹, LAKSHMINARAYANAN ARIVARASU²

¹Saveetha Dental College and Hospital, Saveetha Institute of Medical And Technical Sciences, Saveetha University, Chennai,77, Tamil Nadu, India
²Assistant Professor, Department of Pharmacology, Saveetha Dental College and Hospital, Saveetha Institute of Medical And Technical Sciences, Saveetha University, Chennai-77, Tamil Nadu, India
*Corresponding Author
Email: 151801084.sdc@saveetha.com¹, lakshminarayan512@gmail.com²

Abstract: Siddha medicine is an ancient system of medicine that originated in south India. It is mainly concerned with traditional types of healing using all local herbs. It is used to renew the dysfunctional organs. Siddha medicinal is based on natural properties and not on harmful chemicals, which is used in normal medications hence it is more popular these days due to the outbreaks such as Dengue, Swineflu, COVID-19. As they are no proper therapy during this outbreak, and the pandemic is contagious which spreads quite quickly all around the world. Herbal remedies are more appropriate in this life-threatening condition. As Humans are exposed to many contagious and toxic elements present in environment our immunity is very weak and are high prone to diseases. The weak immunity has no age barrier, it includes infants, middle aged person and older people. In early days, in siddha medicine, Nilavembu was mostly used, since the outbreak of COVID-19 Kabasura kudineer is more popular and effective in managing respiratory conditions such as Flu and cold. As it is antiviral and anti-inflammatory it is widely used in preventing COVID-19. The current review on the siddha herbal medications that popularly used in formulation and treatment of COVID-19.

Keywords: Herbal Medicine; kabasura kudineer; Indian system of Medicine; COVID-19; Immunity.

INTRODUCTION
Siddha medicine is an ancient system of medicine that originated in south India mainly in Tamil Nadu. Siddha in Tamil means “perfection” (Prakash et al., 2017). It is the mixture of ancient medical practices and spiritual alchemy. The Siddha system of medicine follows a traditional and spiritualistic approach of healthcare. It consists of three distinct categories: Deva maruthuvam which is divine method, Maanida Maruthuvam which is rational method, asura maruthuvam is a surgical method (Subbarayappa, 1997). Other divine medicines like parpam, chenduram, guru, kuligai which are prepared from mercury, sulphur are used (Ezhilarasan et al., 2017). On the basis of siddha medicine, physiological function in human body is mediated in three substance: bile (Pitham), phlegm (Karpam), wind (Vatham) (Zysk, 2017), which functions normally in the ratio 4:2:1 respectively. Bile, phlegm, and wind functions normally in the ratio 4:2:1 respectively in which normal health is maintained, if the ratio changes it will lead to various diseases (Saraf, Shukla and Saraf, 2011). Based on the nature, life stages, seasonal variation, the human body is maintained as per siddha medicine (Rangaswamy, 1996). This system of medicine mainly revolves around the development of herbal formulations which have high efficiency and long shelf period. They help in the activation of the cells and maintains their life (P et al., 2019) Three groups have been classified based on the resources they are plant products (mulavargam), inorganic substances (thathuvangal) and animal products (jiva vargam) which are characterized by means of taste (suvai), quality (gunam), potency (veeryam), post-digestive taste (pirivu) and specific action (prabhavam). With reference to the siddha literature, the main cause for the raise of epidemics is due to the damage and contamination of environmental factors namely place, variation in seasons, water and air. (*Fundamentals of Complementary and Alternative Medicine. (Marc S. Miccozi, Ed.) (1996). ISBN 0-443-05355-3. Available from Churchill Livingstone, 650 Avenue of the Americas, New York, NY 10011*, 1997) which makes the hosts more prone to the diseases. The epidemic growth is concerned with the side effects which have been expensive in the community (Anitha and Ashwini, 2017). Many researches have been confined to extract the agents from the medicinal plants due to the increment of death rate linked with the disease and severe side effects of radiotherapy and chemotherapy (Ashwini, Ezhilarasan and Anitha, 2017). Due to the emergence of new compound viruses, sensitivity of human nature, capability to hold the drug are the main issues faced in fighting the viruses. Most attracting fact in recent years have been the natural remedies (Sharma et al., 2019).

Copyright © The Author(s) 2020. Published by Society of Business and management. This is an Open Access Article distributed under the CC BY license. (http://creativecommons.org/licenses/by/4.0/)
Recent studies showing antiviral potential of plant extracts against viral strains resistant to conventional antiviral agents have challenged modern drug discovery practices and deem a very careful look towards exploring natural antiviral components of medicinal plants and exploring traditional medical formulations used in treatment of viral disease (Otimenyin, Uguru and Auta, 2008). Cost, molecular techniques, humans and time are the main sources for the consumption in the process of drug development. In early days, in siddha medicine, Nilavembu was mostly used, since the outbreak of COVID-19 kabasura kudineer is more popular and effective in managing respiratory conditions such as Flu and cold (Karthiga, Rajeshkumar and Annadurai, 2018; Mehta, Deeksha, Tewari, Gupta, Awasthi, Singh, Pandey, Chellappan, Wadhwa, Collet, Hansbro, Rajesh Kumar, et al., 2019). As it is antiviral and anti-inflammatory it is widely used in preventing COVID-19. Our team has rich experience in research and we have collaborated with numerous authors over various topics in the past decade (Deogade, Gupta and Ariga, 2018; Ezhilarasan, 2018a; Ezhilarasan, Sokal and Najimi, 2018; Jeevanandan and Govindaraju, 2018; J et al., 2018; Menon et al., 2018; Prabakar et al., 2018; Rajeshkumar et al., 2018, 2019; Vishnu Prasad et al., 2018; Wahab et al., 2018; Dua et al., 2019; Duraisamy et al., 2019; Ezhilarasan, Apoorva and Ashok Vardhan, 2019; Gheena and Ezhilarasan, 2019a; Mali Sureshbabu et al., 2019; Mehta, Deeksha, Tewari, Gupta, Awasthi, Singh, Pandey, Chellappan, Wadhwa, Collet, Hansbro, Kumar, et al., 2019; Panchal, Jeevanandan and Subramanian, 2019; Rajendran et al., 2019; Ramakrishnan, Dhanalakshmi and Subramanian, 2019; Sharma et al., 2019; Varghese, Ramesh and Veeraiyan, 2019; Gemathi et al., 2020; Samuel, Acharya and Rao, 2020).

The current review on the siddha herbal medications that are popularly used in formulation and treatment of COVID-19.

**Covid-19**

Coronavirus disease 2019 (COVID-19) is mainly caused by severe acute respiratory syndrome coronavirus 2 which is an infectious disease. The disease was first spotted in December 2019 in Wuhan, China, which is now spread throughout the world and has resulted in an outbreak. (‘Coronavirus disease 2019 (COVID-19) | Addressing the impacts of COVID-19 in food crises’, 2020). It is mainly Due to the close contact between person to person, inhaling the droplets by coughing and sneezing. (Hasan et al., no date) Most of the people are infected by the touching the contaminated areas, by physical touch. The virus droplets are transmitted through air for a longer time and distance, whereas it usually falls on the ground (Ezhilarasan, 2018b). During the first three days of disease they are more transmissible after the onset of symptoms. (Ezhilarasan, Sokal and Najimi, 2018) The preferable method of diagnosis is polymerase chain reaction in which the swab is taken from nasopharyngeal areas. (Mehta, Deeksha, Tewari, Gupta, Awasthi, Singh, Pandey, Chellappan, Wadhwa, Collet, Hansbro, Rajesh Kumar, et al., 2019).

According to the world health organization, no vaccines or specific treatment is identified for the management of COVID 19. For now, health management involves the isolation wards for the infective person, temporary treatment of the individual. (‘Coronavirus disease 2019 (COVID-19) | Addressing the impacts of COVID-19 in food crises’, 2020)

**Siddha’s drug selection against COVID-19**

Spreading severe acute respiratory syndrome coronavirus has made a historic transition from December 2019 to till date. In the present scenario COVID 19 has become a major burden on the public health, economic stability of societies around the globe. The world scrambles to find a cure for COVID-19 and health experts have suggested boosting the body’s immune system that might help to minimise the effects and hasten the recovery from the disease. Currently, no authorized drug and vaccine infections in modern medicine, clinicians resort symptomatic relief to combat these infections. However, in Siddha, the infections - treated by specific courses of medication that are termed as regimen. The regimen used during the initial days of infection in the treatment of COVID 19 which includes one formulation that is Kabasura Kudineer

**Composition of kabasura kudineer**

The kabasura kudineer means [kabam – cold; suram – fever; kudineer – concoction], it is a siddha formulation. Kabasura kudineer is the coarse powder of drugs used for the preparation of decoction. This herb popularly was called the Bile of earth, King of bitters which is the native to India and Sri Lanka (Mahadevan and Palraj, 2016). Its Composition includes fifteen herbal ingredients namely Zingiber officinale, piper longum, Syzygium aromaticum, Tragia involucrata, Anacyclus pyrethrum, Hygrophila auriculata, Terminalia chebula, Adhatoda Vasic, Coleus amboinicus, Sauussurea Lappa, Tinospora cordifolia, Clerodendron serratum, Andrographis paniculata, Suda Acura, Cyperus rotundus. (Thanigavelan and Thanigavelan, 2012) Zingiber officinale which helps to promote digestion and it is beneficial in treating asthma, piper longum has the potential to treat indigestion, asthma and cough. Syzygium aromaticum has the power to kill the bacteria and promote liver health. Tragia involucrata has also been found to be effective in treating pain and bronchitis. Anacyclus pyrethrum helps in healing mouth ulcers, sore throats, cough. Hygrophila auriculata used to treat blood disorders (Rajeshkumar et al., 2018). (Sujatha, Asokan and Rajesh Kumar, 2018) Terminalia chebula is...
also used to treat cough, asthma, anoxia, vomiting. Adhatoda Vasica is useful to treat respiratory and bleeding diseases. Coleus amboinicus is a medicinal plant traditionally used to treat throat infections, cough and fever, nasal congestion and digestive problems. Tinospora cordifolia is used for diabetes, high cholesterol, upset stomach and other cancers. Clerodendron serratum is used to treat jaundice and various disease associated with liver. (Zysk, 2017). Since time immemorial it has been used by Indian people for treatment of various diseases due to its medicinal properties. Kabasura kudineer possesses antibacterial, anti-carogenic, anti-helminthic, anti-diabetic, anti-oxidant, astringent, anti-viral, cytotoxic, and anti-inflammatory activity. (Lakshmi et al., 2015)

Preparation of the drug
The herbs taken should be dried and blended into a powder. Keep the powder in the direct sunlight, so that the moisture present in it is removed and in dried churnam, water is added to it and heat till it reduces to quartered the initial volume. Filter the decoction with the cloth so that the waste material present is removed and the liquid is stored and is consumed within 3 hours of preparation. (Lakshmi et al., 2017). (Anbarasu, Manisenthil and Ramachandran, 2011)

Preliminary phytochemical and physio-chemical activity of Kabasura Kudineer
The study was reviewed in previous articles, the study was done for total ash, pH, and the extracted powder of Kabasura kudineer. It showed that the colour of kabasura kudineer is dark brown and Andrographis is dark green. (Otvos et al., 2019) The phytochemical screening of the formulation extract of kudineer shows the presence of terpenoids, alkaloids, carbohydrates tannins is a major components. (M. and Duru, 2015). (Menon et al., 2018). In the previous study, it has been tested in osteoarthritis patients, the antiinflammatory effects and safety which has been reported the herbal plants has the efficacy against several human problems, which comes out to be in a positive results. (Sharma et al., 2019)

Antiviral activity and Prophylaxis activity
Previous studies showed that to identify the concentration of siddha polyherbal formulations five types of bioassays has developed which shows the potential inhibitory activity of experiments viruses which is prepared and was checked using PRINT which determines number of plaques at MOI 1. (Merish et al., 2015) Based on the number of plaque forming units which is measured to measure magnitude of inhibition, the effect of formulation can be assed. It was observed that none of the formulation was not able to inhibit or reduce number of plaque forming units. (Jain et al., 2017) For all the concentrations- the number of plaques formed -more than 50-equivalent - number of plaques - concentrated virus -MOI (Perumalsamy et al., 2018). (Gheena and Ezhilarasan, 2019b)

Indications and Dose of kabasura kudineer
Kabasura Kudineer in Siddha implies fever because of overabundance of Kapha, this choornam is powerful in adjusting the kapha dosha which is known to contaminate the respiratory system. The formulation is especially used in reducing the side effects related with respiratory illnesses, for example, fever, cough, and cold, breathing trouble and flu. (Karthiga, Rajeshkumar and Annadurai, 2018) This plan is commonly made as a creation and afterward controlled. It is given for a time of 6-12 weeks dependent on the exhortation given by the doctor. 5-10 grams of choornam powder is blend in the 300 ml of water and boil it in low fire till the concoction is decreased to 30ml with nectar, if both Ayurveda and Allopathy are taken in 30minutes after the primary one. 25-50ml of prepared decoction twice every day or as coordinated by the doctor. Though this decoction doesn’t respond with homeopathy medication. It is Potent, anti-inflammatory which decreases swelling and cuts down irritation, anti bacterial, anti viral, antipyretic (reliefs fever) (Schwartz et al., 1988)

Benefits of kabasura kudineer
Kabasura kudineer has carried out the quality and purity. It helps to boost the immune system which has no side effects and Reduces symptoms. It is commonly used for the treatment of fever, sneezing, dry cough, sore throat, anosmia, body pain relief and also as a prophylactic at the time of viral epidemic. It acts as a way to boost the immunity (Rocke et al., no date). There are no side effects upon taking this choornam, however, it is always best to seek the advice of an ayurvedic physician before taking it. This formulation is safe when taken together with homeopathic medicine. It also does not show any adverse effects when taken along with multivitamin and mineral supplements. (Rio, del Rio and Malani, 2020) Our institution is passionate about high quality evidence based research and has excelled in various fields (PC, Marimuthu and Devadoss, 2018; Ramesh et al., 2018; Vijayashree Priyadharsini, Smiline Girija and Paramasivam, 2018; Ezhilarasan, Apoorva
and Ashok Vardhan, 2019; Ramadurai et al., 2019; Sridharan et al., 2019; Vijayashree Priyadharsini, 2019; Chandrasekar et al., 2020; Mathew et al., 2020; R et al., 2020; Samuel, 2021)

**Symptom management of COVID-19 like illnesses**

Many products and antibiotics are been used for prevention against the viral flu. The oxidative stress that damages the airway epithelial cells is the viral infections. Herbal remedies are more appropriate in this life threatening conditions. As Humans are exposed to many contagious and toxic elements present in environment our immunity is very weak and are high prone to diseases. The weak immunity has no age barrier, it includes infants, middle aged person and older people. (Vogel and Vogel, 2013). Management of corona viral infections is the supportive care, preventing further progression by the absence of any antiviral agent is the vaccine (Rajeshkumar and Naik, 2018).

Precautions to be taken in prevention of the illness (Wilder-Smith and Freedman, 2020)

- Maintain good personal hygiene.
- Practice frequent hand washing with soap.
- Cover mouth when coughing or sneezing.
- Avoid close and physical contact with people suffering such as cough, runny nose etc.
- Wear a mask if you have respiratory symptoms such as cough or runny nose, it even important for the normal people to wear mask to prevent themselves from the virus.

**CONCLUSION**

The present review shows the importance of a few Indian medicinal plants that have been used for several decades in the treatment of various respiratory conditions. It shows the effects upon taking this choornam. However, it is always best to seek the advice of Ayurvedic physicians before taking it. The formulation is safe when taken together with homeopathic medicine as it doesn’t react. It also does not show any adverse effect which is taken along with Multivitamin and mineral supplements. It also highlights the pathways that the plant-based medicines may target to reduce the disease burden. Thus, proactive investments in researches based on Indian medicinal plant derived vaccines or drugs to treat COVID-19.

**REFERENCES**


