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Siddha Based Decoctions Better Remedy to Overcome COVID-19 - A Review

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ABSTRACT

Background: The novel Coronavirus disease 2019 (COVID-19) is caused by SARS-CoV-2, which is the causative agent of a potentially deadly disease that is of severe global public health concern. The rapid onset of COVID-19 is wreaking havoc worldwide because of inadequate risk assessment regarding the urgency of the situation. The COVID-19 infection has spread over 210 countries and territories around the world as there are no clinically approved treatments or vaccines available to date. When compared with SARS and MERS, COVID-19 has spread drastically, due to increased globalization and adaptation of the virus in every environment. Siddha system of medicine (SSM) is one of the oldest traditional systems of medicine, which has originated from India and is practiced mainly in the southern part of this country for curing different types of diseases including even chronic conditions. Siddha based approaches have been proved to cure various respiratory diseases.

Material and Method: The present study has reviewed articles through various internet sources such as PubMed, Science Direct, and Google Scholar.

Conclusion: The present study explores the properties of different traditional herbs in treating the novel Coronavirus disease. The aim of the study is to analyze Siddha-based decoctions as a better remedy in overcoming COVID-19. The present study has collected various articles related to the current topic from multiple internet sources. The present study thus concluded that the Siddha-based decoctions may mitigate the COVID-19.

Key Words: Herbs, Siddha medicine, Coronavirus, SARS-CoV-2, Kabasura Kudineer, Nilavembu Kudineer

INTRODUCTION

Human coronaviruses belong to the order Nidovirales, family Coronaviridae, and genus Alphacoronavirus or Betacoronavirus¹. The emerging SARS-CoV-2, a beta coronavirus, can cause COVID-19, is highly contagious; respiratory droplets and contact are the main routes of transmission². The SARS-CoV-2 infection, exhibited by clustering onset, is more likely to affect elderly people with comorbidities and pregnant women³. It is common that for people who are in contact with a large number of viruses or whose immune functions are compromised, they have a greater chance to be infected than others. The estimated mean incubation period of SARS-CoV-2 is 1-14 days⁴. Fever is generally the major and basic symptom of COVID-19, which can be followed by no symptom or other symptoms such as dry cough, shortness of breath, muscle ache, dizziness, headache, sore throat,

rhinorrhea, chest pain, diarrhea, nausea, and vomiting⁵. In severe cases, patients rapidly continued to develop the acute respiratory syndrome, septic shock, metabolic acidosis, and coagulopathy⁶.

The Siddha system of medicine is one of among the earliest branches of the traditional Indian medical system and can be traced back to the Sangam period (500 BC)⁷. This system of medicine follows the holistic approach of healthcare^{8,9}. According to the Siddha literature, the vitiation of environmental factors such as water, air, place, and season are regarded to be responsible for the formation of diseases. When contamination and vitiation of these components occur, epidemics follow¹⁰. At present water-borne diseases, environmental diseases, epidemiological disorders and seasonal disorders due to infections can be associated with Janapadodhwamsa Vyadhis, a medical term well defined in the Indian tradition-

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al medical system⁸. Several indigenous drugs have been illustrated in Siddha and Ayurveda for controlling inflammation, fever, and other diseases^{11,12,13,14}. In the long term curing chronic disorders, like rheumatic diseases, combinations of different plant families, and species active principles usually exhibit remarkable potency and tolerance. Siddha based medicine may also aid in preserving the bone framework^{15,16,17,18}. Traditional herbs can also promote proper internal regulation of the body^{19,20}.

It is well recorded that the plant possessing anti-inflammatory properties also contain antipyretic and analgesic activities or vice versa. The nilavembu kudineer choornam (NKC) is a conventional preparation used in the treatment of chikungunya fever as Siddha medicine in Tamil Nadu, India. It is a mixture of commonly used food ingredients as well as medicinal plants²¹. Kabasura Kudineer is a compound concoction consisting of fifteen herbal ingredients. It is often used as a remedy for fever with or without respiratory infection. It was prescribed extensively during the epidemic of Swine flu as a prophylactic and media reports gave a renaissance to this official Siddha formulation²². Siddha medicinal preparations have been classified as 32 internal and 32 external medicinal forms and choornam is one among the internal medicinal form²³.

The aim of the present study is to analyze Siddha-based remedy as a better approach to combat novel Coronavirus disease.

MATERIALS AND METHODS

The present study has collected various articles related to the current topic from various internet sources such as PubMed, ScienceDirect, Google Scholar.

SIDDHA AND COVID-19

Siddha Medicine

Siddha medicine is the ancient medical system that is broadly practiced in South India. It was enriched with ethnic medical knowledge of Tamil people, a native of the rich biodiversity zone of Western Ghats^{24,25,26}. A single herb may contain many phytochemical constituents that function alone or in combination with other compounds to produce the desired pharmacological effect²⁷. The antiviral effects of medicinal plants have played a tremendous role at different stages of viral growth²⁸. Plant-derived pharmacological formulations marked a major contribution to viral infections²⁹. Based on the availability of suitable, efficient, and rapid bioassay systems, the antiviral compounds have been used for rapid screening from plant extracts and fractions³⁰. Instead of synthetic antiviral drugs, medicinal plants deliver basic raw ma-

terials for important antiviral drugs³¹. Synthetic drugs have been replaced by medicinal plants, as life-saving drugs in various viral diseases³².

Contribution of Siddha medicine in the treatment of diseases

Brahmananda bhairavam mathirai and Vishnu chakram are used for the treatment of the pyrexia phase of chikungunya and may perform as antivirals. Nilavembu Kudineer is recognized for its antipyretic, anti-inflammatory, and analgesic properties and hence has a role in immune modulation³³. Arumuga chenduram is a herb-metallic formulation acknowledged for its role in the recovery of fever and arthritis¹¹. Linga Chenduram No. is one of the medicines used in Siddha for treating 'Azhai Keel Vayu' which may be associated with osteoarthritis having the symptoms of both pains and swelling in knee joints³⁴. Thirikadugu choornam is used in the treatment of digestive disorders such as indigestion, dyspepsia, flatulence, and intermittent fever. Development of Ayurvedic and Siddha Medicine via the Application of Modern Pharmaceutical Technique³⁵. It is believed that the Siddha System of Medicine is effective in treating any type of disease³⁶. For example, it is effective in the treatment of skin diseases³⁷, arthritis³⁸. Siddha medical practitioners have also recorded that this system is very effective in reducing the highly debilitating conditions in HIV/AIDS³⁹ as well as found to cure HIV positive and sexually transmitted diseases (STD)⁴⁰. Siddha medicine can also be used to reduce hypertension⁴¹. Other diseases such as cancer and diabetes⁴² (literally known as putrunoi and neerizhivu noi in Siddha System of Medicine) can also be treated using Siddha drugs⁴³.

Role of Siddha medicine in COVID-19

Nilavembu kudineer composition is equal to the heartwood of *Santalum album* Linn. (Santalaceae), rhizomes of *Zingiber officinale* Rosc. (Zingiberaceae), fruits of *Piper nigrum* Linn (Piperaceae), the whole plant of *Andrographis paniculata* (Burm) Wall. ex Nees (Acanthaceae), tubers of *Cyperus rotundus* Linn. (Cyperaceae), the roots of *Vetiveria Zizanioides* (Linn) Nash. (Poaceae), whole plant of *Hedyotis corymbosa* (Linn.) Lam. (Rubiaceae), root of *Plectranthus Vettiveroides* (Linn.) Nash. (Lamiaceae) and the entire plant of *Trichosanthes cucumerina* Linn. (Cucurbitaceae). All these plants are commonly used in the treatment of fever, inflammation, arthralgia, arthritis, gastric ulcer, jaundice and general debility conditions⁴⁴.

In Siddha, Kabasura kudineer choornam is broadly prescribed for the control and prevention of swine flu. The phytochemical elements present in choornam may be responsible for its anti-inflammatory, antipyretic, analgesic, anti-viral, anti-bacterial, anti-fungal, anti-oxidant, hepato-protective, anti-diabetic, anti-asthmatic, antitussive, immunomodulatory, antidiarrheal and anti-oxidant activities.^{45,46}

CONCLUSION

The present study focused on limited Siddha-based medicinal herbs. In the future, further study has to be done using other traditional plants. Considering the anti-viral, anti-inflammatory properties of traditional herbs as well as absence of side effects of Siddha medicine, the present study thus concludes that Siddha-based decoctions are a better remedy to overcome COVID-19.

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Conflict of Interest

The authors declare no conflict of interest

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