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A Review on Exploring the Siddha and Ayurvedic Medicines for COVID-19 Infection

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ABSTRACT

Aim: The aim of this study is to review the curative effects of Ayurvedic and Siddha medicines and explore whether Ayurvedic medicines can cure global pandemic COVID-19.

Introduction: Ayurvedic medicines bring a huge impact both on our physical and mental health. It is highly effective and more effective in chronic diseases. Natural medicines like Ayurveda, Siddha and Unani are the traditional medicine system which is known as the science of longevity and plays an important role in encountering global health care needs. Ayurvedic medicines are a practice towards psychological, philosophical, ethical, and spiritual health. Covid19 has occurred in many different kinds like mild respiratory illness (nose, throat, and lungs), severe acute respiratory syndrome (SARS), and Middle East respiratory syndrome (MERS). Different studies have been done on curative effects of Ayurvedic and other traditional medicines on these various diseases.

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

Conclusion: Traditional medicines are known for their safety, potential efficacy, and ease of availability as India is the country where the world's oldest traditional living health care system originated. The present study thus concluded that Siddha and Ayurvedic medicines have mitigated COVID-19 infections.

Key Words: COVID-19, Siddha, Ayurveda, SARS, Traditional medicine, Chronic disorders

INTRODUCTION

COVID-19 (coronavirus) is an infectious disease that has spread to many countries and led to a global pandemic. Covid19 occurs in many different kinds like mild respiratory illness (nose, throat, and lungs), severe acute respiratory syndrome (SARS), and Middle East respiratory syndrome (MERS) [1]. To date, there is no vaccine or treatments for covid19. But different treatment for COVID-19 have been examined like plasma therapy, hydroxychloroquine, drugs etc. but these treatments have not been proven to be 100% effective [2]. Natural medicines like Ayurveda, Siddha, and Unani are the traditional medicine system which is known as the science of longevity and plays an important role in encountering global health care needs [3] .

Traditional medicines make use of plants, minerals, and animal products for curing many diseases. These medicines build immune-stimulating and inflammation-modulating effects to manage the immune system [4,5]. Previous studies have shown that plants which showed inhibitory actions towards HIV proteases can also show promising effects on COVID-19 treatment. These include *Acacia nilotica* [6], *Eugenia jambolana* [7], etc. In another study, *Hyoscyamus niger* was found to be a bronchodilator and had inhibitory effects on calcium channels [8].

Thus it is important to explore the effect of traditional medicines on SARS-COVID. Indian medicines are widely used for chronic disorders like respiratory problems. AYUSH recommended medicinal plant extract for treating covid19 is a proactive investment in research to overcome this fatal infection. So it's time for all the citizens to join hands together to fight against this coronavirus by practicing self-hygiene and social distancing.

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MATERIALS AND METHOD

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

SALIENT FEATURES

Coronavirus

Coronavirus is an infectious disease which contains an enveloped positive-sense RNA virus. In some studies, they have found the possibility of using miRNA to inhibit infections caused by coronaviruses like COVID-19, SARS-CoV, and MERS-CoV [9]. It is composed of unusually large RNA genome and has a unique replication strategy. These are the largest group of viruses belonging to the family Nidovirales [10]. Coronavirus virions are spherical in shape having a diameter of 125nm. Covid19 can be depicted by cryoelectron tomography and cryoelectron microscopy [1]. Coronavirus can become even more serious in people who are having hypertension. Hypertension has always been a serious problem in many diseases and many methods and research have been done to treat hypertension [11]. Coronavirus is also causing stress and anxiety due to the unpredictability of this disease [12]

Coronavirus - diagnosis, symptoms, and prevention

The global pandemic coronavirus is diagnosed by reverse transcriptase-polymerase chain reaction (RT-PCR) test and CDC test which is used in identifying the genetic material [2] Coronavirus symptoms include fever, cough, shortness of breath, sore throat, and headache. As always the proverb says 'Prevention is better than cure'. Coronavirus can be prevented by the use of PPE (personalized protective equipment, self quarantine, sanitation and frequent hand wash) [13].

Treatments for coronavirus so far

There is no vaccine for coronavirus but different methods have been examined for the treatment of covid19 like plasma therapy, hydroxychloroquine, drugs, etc [2]. Pain relievers like ibuprofen, acetaminophen have also been administered. Other methods like cough, syrup, medication, rest, and more fluid is recommended [14].

Ayurveda and Siddha medicines

Ayurveda is the science of life which is a holistic approach towards personalized medicine. This brings change to the complete medical system and brings a huge impact both on our physical body and mental health. This is a practise towards psychological, philosophical, ethical, and spiritual health [15]. Ayurvedic and siddha medicines can cure many problems[16]. Ayurvedic medicines like *Curcuma longa, Ocimum sanctum*, and *Tinospora cordifolia* have the ability to cure various clinical conditions [17,18,19]. Ayurvedic medicine has the concept of self healing. It is highly effective and more effective in chronic diseases. It also has an anti-bacterial effect [20].

Ayurvedic medicines which can help in coronavirus treatment

In Tamilnadu, a medicinal plant called *Vitex trifolia and Sphaeranthus indicus* was found to reduce the effect of inflammatory cytokines [21] In another study plants like glycyrrhiza glabra and *Allium sativum* were known to target the viral replication of SARS-Cov [22]. *Clerodendrum inerme* gaertn inactivates the viral ribosome. *Strobilanthes cusia* blocks the viral RNA genome synthesis [23]. *Vitex negundo* is known to target the reverse transcriptase activity of HIV and can be studied for activity against SARS-Cov [24] *Hyoscyamus niger, Justicia adhatoda*, and *Verbascum thapsus* reduced infections caused by influenza virus [25].

SIDDHA, AYURVEDA, AND COVID-19

Coronavirus is a global pandemic that is caused by an unusually large RNA genome and has a unique replication strategy. Similarly, SARS which occurred in 2003 and was reported in 29 countries caused many deaths across the world[26]. Middle East respiratory syndrome coronavirus also has no clear consensus for treatment [27]. Since there is no proper treatment for these diseases, prevention is the only solution.

Since allopathy does not show significant results on these diseases, Ayurvedic medicines properties have been studied in various diseases. In Tamilnadu, medicinal plants like *Vitex trifolia and Sphaeranthus indicus* are found to reduce inflammatory cytokines [21]. In another study, plants like *Glycyrrhiza glabra and Allium sativum* are known to target the viral replication of SARS-Cov [22]. Since SARS is a type of coronavirus, these medicinal plants can be used for the treatment of covid19.

In a country, 13 different kinds of herbs were used for a study purpose. These plants include *Agaricus brazi murill* [28], *Panax ginseng* [29], *and Cordyceps sinensis* [30]. These plants were given to a number of people and positive results were obtained. In another clinical study, which was done on effects of kalmegh, it is reported that 80% cure rate from infected disease hepatitis. This result was noted due to the decrease in liver enzymes seen in hepatitis A and E consisting of RNA virus [31]. In a study, root extract of *Cryptolepis sanguinolenta* shows a promising treatment of *Falciparum malaria* [32]. From previous studies [33- 41], it is believed that this condition may affect anybody especially people who have various illnesses.

CONCLUSION

Traditional medicines like Ayurveda and Siddha have shown continuous records in treating various diseases. The Ayurvedic system of medicine has a huge potential in preventive and curative healthcare of this pandemic and can be employed for the treatment of several diseases. Traditional medicines are known for their safety, potential efficacy and ease of availability as India is the country where the world's oldest traditional living health care system originated. From this meticulous review, the present study has suggested and concluded that Siddha and Ayurvedic formulation may be a challenging treatment for COVID-19 spread.

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