

Proactive Steps by the Ministry of AYUSH in mitigating COVID-19: An update on contribution of Siddha

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The current pandemic of COVID-19 is unprecedented. Coronaviruses chiefly cause respiratory tract infections and has high infectivity and mortality as well as heavy damage, such as severe acute respiratory syndrome (SARS) and middle east respiratory syndrome (MERS) on public health. Pneumonia associated with the 2019 novel coronavirus (2019- nCoV) emerged in Wuhan, China in December, 2019 and has spread rapidly with 68165877 confirmed COVID-19 cases, 1557385 confirmed deaths globally as of 10th December 2020^[1]. This new type is said to be novel due to its complex envelop protein raised from multiple mutations. These mutations also alter the tissue tropism, eventually harbouring into varieties of hosts by damaging hosts immune response.

The symptomology of COVID-19 can be correlated to *Kabha Suram* including specific symptoms such as loss of taste mentioned in the Siddha classics. The Ministry of AYUSH has issued an advisory as early as 6th March 2020 prior to WHO declaring COVID-19 as pandemic. In this direction, the Government of Tamil Nadu also issued a G.O. (Ms). No. 201 dt. 23rd April 2020 *Aarokyam* special programme with AYUSH interventions for COVID-19 on 23rd April 2020. The proactive steps taken by the Ministry of AYUSH and collective team efforts put-forth by all stake holders enabled the Ministry of AYUSH to publish the Guidelines for Siddha practitioners for the management of COVID-19.

In this regard, the Interdisciplinary AYUSH Research and Development task force established by the Ministry of AYUSH has provided the framework and protocol to conduct three types of studies. Population health study - observation of people's social behaviour patterns regarding the immune boosting measures of AYUSH/Siddha system of medicine through AYUSH Sanjivani^[2]. Prophylactic intervention study on Health care workers, people at quarantine and isolation facilities and add-on therapy on COVID-19 patients^[3].

Earlier, Siddha medicine was useful to mitigate the epidemic outbreaks of viral fevers like Chikungunya, Dengue and Bird flu, where the efficacy of the Siddha drugs was evaluated in research laboratories as well as the clinical centers and the findings led to administration of these Siddha drugs along with allopathy drugs in all the Government hospitals.

Siddhars have recommended certain basic lifestyle guidelines i.e., preventive measures that help to prevent diseases. Rejuvenating procedures known as *Kaya Karpam* act as immunomodulators. Siddha intervention activates physiological processes that influence metabolic and immunological status and offers palliative care even for patients with comorbidities. Therefore, Siddha medicine offers care, not only for chronic non communicable diseases, but also it is promising to combat the COVID-19 pandemic.

Prior to population based studies, *in-silico* studies and *in-vitro* studies of *Kabha Sura Kudineer* (KSK) exhibited high affinity for binding with SARS-COV2 protein spike and showed significant activity more or less to inhibit virus replication similar to standard drug Remdesivir^[4]. Immuno-modulatory, thrombolytic and anti - viral activity of KSK has been established^[5].

The interim results of prophylactic study entitled "a prospective Non-randomized Open label Controlled Interventional study on the effect of Siddha intervention – KSK as a Prophylactic measure among high risk population (Health Care Workers/Containment Zone population) exposed to COVID-19 (SIDDHALION)" as well as the preliminary results conducted at Govt. Stanley Medical College in study group (vitamin C with zinc and KSK) compared to control (vitamin C and zinc) are promising^[6]. Few more clinical trials including double blind randomized controlled trials, the gold standard are in progress.

Effective functioning of Siddha Covid Care Centres (CCC) and its outcomes in successfully treating more than 28,000 patients has created an impact in the state of Tamil Nadu. The successful model developed in Chennai has been replicated in other parts of Tamil Nadu, and 33 exclusive Siddha CCC are providing holistic in-patient care free of cost to COVID-19 positive patients.

The hall mark of Siddha system of medicine is customized tailor-made medicine according to one's constitution and presenting symptoms. Many modern private hospitals dispensed Siddha decoction/potion as part of hospital diet to willing patients. Such was the strength and impact of Siddha medicine which capitalized the current pandemic through comprehensive approaches mentioned in AYUSH systems.

Thus, Siddha system is gaining unabated popularity among the masses giving

a major boost to Siddha system in mitigating this pandemic in an integrative manner.

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