

A 26-Year-Old Woman with Bronchial Asthma and COVID -19 Treated by Stand Alone Siddha Medicine: A Case Report

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ABSTRACT

Background: Corona virus disease 2019 (COVID-19) is a public health emergency of international concern. The global population lacks immunity to COVID-19 and is generally susceptible. Underlying conditions, especially chronic respiratory diseases, may affect progression, treatment and prognosis of COVID-19. The majority of people who exposed to COVID-19 suffer only mild respiratory symptoms like cough, cold, difficulty in breathing, etc and these symptoms were correlated with *Kaba Suram* in the Siddha literature.

Case Summary: Siddha Clinical Research Unit, New Delhi (CCRS), Ministry of AYUSH, Govt. of India had reported a patient with confirmed COVID-19 by RT-PCR with bronchial asthma as a co-morbid condition. Recovery time from disease onset to negative test for COVID-19 was 19 days.

Conclusion: Since the patient residing in Dwaraka, New Delhi has bronchial asthma as a co-morbid condition, both air pollution and the winter season are likely to increase the severity of the disease. But it was observed that the patient's condition did not deteriorate, so it could be presumed that the management of COVID-19 with the given Siddha internal medicines and external therapies as a standalone treatment ceased the progress of the disease to a severe stage.

Keywords: Bronchial Asthma, Corona virus, COVID-19, *Kaba Suram*, Siddha Medicine

INTRODUCTION

Corona Virus Infectious Disease 2019 (COVID-19), caused by the severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) has developed into a pandemic. In this context, a plenty of research works in traditional medicines are conducted around the world in the search for potential treatments for COVID-19 [1]. Siddha system of medicine is one among the Indian traditional medicines have wide potential for usage in such conditions owing to their longstanding use in the community, ancient references and clinical efficacy. The majority of people who contract Covid-19

suffer only with mild respiratory symptoms like cough, cold, difficulty in breathing, etc. This case report briefly postulates the efficacy of Siddha medicines in COVID-19.

METHODS

2.1 CASE PRESENTATION:

2.1.1 Patient Information:

A 26 years old woman is a student from Dwarka-New Delhi. She was well built, with a height of 158 cms and weight of 59 kgs.

2.1.2 Present Medical History

Patient on the first day dated 15/11/2020 fell ill and had been self-medicating in allopathy (drug unknown) for 5 days, but had felt no improvement. After that her father contacted the Siddha Physician at Siddha Clinical Research Unit, Safdarjung hospital, New Delhi for a consultation on 20/11/2020. Presenting symptoms were fever associated with body pain, sore throat, cough, loss of taste (Ageusia) and loss of smell (Anosmia). Since these are the common symptoms of COVID-19, the patient was advised to take RT-PCR (Reverse Transcriptase – Polymerase Chain Reaction) for COVID-19 and concurrently the patient was advised to start Siddha medication for her clinical symptoms. She was advised to self-quarantine at home. COVID-19 RT-PCR was positive on dated 21/11/2020. (RT-PCR relies on its ability to amplify a tiny amount of viral genetic material in a sample and is considered to be the gold standard for identification of SARS-CoV-2 virus.)[2]

2.1.3 Past Medical History:

She has been a Known case of Bronchial Asthma since 5 years, under low dose inhaled corticosteroids. Patient was not a known case of Diabetes Mellitus / Hypertension/ Thyroid dysfunction/ Primary Tuberculosis or any other co-morbidities.

SIDDHA INTERPRETATION ON THE PATIENT'S CONDITION:

According to Siddha science, physical body is composed of 5 elements. *Mann* (Earth), *Neer* (Water), *Thee* (Fire), *Vaayu* (Air), *Aagayam* (Space). Combination of each elements results in three humours and the physiological function in the body is mediated by these three humours- *Vatham*, *Pitham*, and *Kabam*. The three humours are said to occupy the lower, middle and upper parts of the body respectively and maintain their integrity. For example, *Vatham* occupies pelvis and rectum; *Pitham* occupies stomach and internal viscera and *Kabam* occupies

lungs, throat and head. If these three humours function normally, health is maintained.

In the above mentioned case, the modern diagnosis was arrived by the patient's major symptoms like fever associated with body pain, cough and difficulty to breathe which can be correlated with the Siddha science diagnosis *Kaba Suram* as per standard Siddha literature. The following Siddha poetry line by Siddha Sage Theraiyar, "*Kudarthannil seethamalaathu suramum vaarathu*" denotes the pathology of *Suram* (Fever). Formation of *Aamam* alias *Seetham* is the main reason for increasing body temperature (*Aamam* is the thickening of mucus membrane in the stomach walls). This *Aamam* is absorbed by the vessels and distributes all over the body and obstructs the excretion of sweat. As per the Siddha poem the lyrics "*Kabathinai yandri kaasa swasang -kaanathu*" denotes that without the increase of *Kabam* there is no chance of cough (*Kaasam*), dyspnea (*Swaasam*).[3]

In the above mentioned case, the diagnosis was initially made, based on the patient's symptoms and the pandemic season. Life style, environmental condition, seasonal variations and food habits causes deranged *kabam* humour (cough, rhinitis, sore throat) and derangement of *Vatham* (*Uthanan* - It is responsible for all the upward movements and *Samanan*- This is responsible for the neutralization of the other 4 *Vali / Vaayu* (Air), i.e. *Pranan* – It is responsible for the respiration, functions of mind, intellect, will power and five sense organs, *Abanan* - It is responsible for the downward expulsion of stools and urine, ejaculation of semen and menstruation, child birth, *Viyanan* – It is responsible for the motor and sensory functions of the entire body and the distribution of nutrients to various tissues. and *Uthanan*. Moreover it is responsible for the nutrients and water balance of the body) causes cough, difficulty in breathing. In the above mentioned case, *Kabam* and *Vatham* humor were predominantly deranged. [3]

SIDDHA LINE OF TREATMENT

The medicines supplied to the patient were procured from IMPCOPS (The

Indian Medical Practitioners Co-operative Pharmacy and Stores Ltd) GMP certified manufactures, Chennai, Tamil Nadu.

INTERNAL MEDICINE

Table 1: Siddha Internal Medicines, Dosage, Adjuvant and Time of Administration

Medicine	Dosage and Adjuvant	Time of Administration
Kabasura kudineer (Decotion)	60 ml	Twice a day
Brammanandha bairava maathirai (Pill)	2 pills with Ginger juice	Twice a day
Thalisadhi chooranam (Powder)	2g with Honey	Twice a day
Amukkara chooranam (Powder)	2g with Milk	Twice a day
Adathodai manapagu (Syrup)	5ml with Hot water	Twice a day

2.3.2 EXTERNAL MEDICINES AND THERAPIES:

Table 2: Siddha External Therapies and Mode of Application

External therapies	Preparations	Mode of Application	Indications	Scientific validation
<i>Ottradam</i> (Fomentation)	<i>Karpoorathy Thylam</i> (Oil)	Oil was rubbed on the chest region and fomentation was given	It relieves Chest congestion, common cold [4]	<i>Ottradam</i> removes our wastes as toxins through the skin and balances <i>Mukkutram</i> (Three humour). It is also dilating all body channels for the cleansing.
<i>Vedhu</i> (Steaming)	<i>Karpoorathy Thylam</i> few drops and <i>manjal</i> (Turmeric powder) poured in boiled water to develop vapors.	The body was covered by a cotton blanket and vapor was inhaled.	Relieves the congestion from the mucous membrane in bronchitis and allergic asthma. It expels phlegm from lower respiratory tract and relaxes chest muscles, thus reduces cough.[4]	This type of treatment is helpful in curing <i>Vatham</i> as well as <i>Kabam</i> diseases.[5]
<i>Gargling /mouth wash</i>	1.Turmeric [6] 2.Salt 3. <i>Thiripala Chooranam</i>	Patient was advised to gargle these medicines with luke warm water for 1-2 minutes twice daily	To reduce intraoral viral load. “ <i>Alaththilurai nalluppu...kilaiythakaba....pokkung kaasiniyul maathay kazharu</i> ” <i>Kabam neengum</i> (It will clear increased <i>Kabam</i>). Salt water gargle relieves sore and swollen throat.[9]	The effect turmeric observed may be because of its anti -inflammatory action.[7] It possesses Anti viral activities. [8] Gargling a salt solution, a natural, and harmless substance, can reduce the pain and other symptom of sore throat in patients with non-bacterial pharyngitis.[10] Gargling a salt solution, a natural, and harmless substance, can reduce the pain and other symptom of sore throat in patients Gargling a salt solution, a natural, and harmless substance, can reduce the pain and other symptom of sore throat in patients Triphala is an antiviral operator that acts against swine flu and other viruses. [11]. Anti-microbial effect of Triphala has been proven <i>in-vitro</i> as it has been shown to inhibit <i>Streptococcus mutans</i> at concentrations as low as 50µg/ml.[12]

2.3.3 Siddhar Yoga

Table : 3 Thirumoolar pranayamam

Type of Yogam	Frequency	Method	Scientific validation
Thirumoolar <i>Pranayamam</i> (Yogic breathing exercise)	Thrice a day	It is a practice of ordered breathing. The process of <i>pranayamam</i> consists of three acts, namely <i>Pooragam</i> (inspiration) <i>Kumbakam</i> (retention) and <i>Resagam</i> (expiration).	Recommended for strengthening the respiratory system and to reduce stress. Several molecules belong to the Immunoglobins super family, suggesting that <i>pranayamam</i> induces the molecules to promote immune response as a first line of defense in the mucosa.[13]

STUDY OUTCOME

The patient tested for COVID-19 RT-PCR positive on 21/11/2020 (Figure 1), but as per the advice of the Siddha consultant from Siddha Clinical Research Unit, Safdarjung Hospital, New Delhi she had already started the Siddha medication for her existing symptoms from 21st November 2020. After intake of combination of Siddha medicines as standalone treatment the patient's temperature decreased within 2 days. The patient reported resolution of most of her

symptoms after 9 days and the patient's RT-PCR test was negative on 10/12/2020 (Figure 1).

Table 4: Day by day improvement of patient's health condition

Date	Patient Condition
15/11/2020	Temperature-101°F, Sore throat
20/11/2020	Loss of smell and taste. Temperature became normal. COVID-19 RT-PCR positive
26/11/2020	Cough, Body pain
04/12/2020	Smell and taste returned normal. Other symptoms reduced.
10/12/2020	COVID-19 RT-PCR Negative. Mild body pain persist.



FIGURE 1: COVID-19 DETECTED BY RT-PCR

There was resolution of symptoms gradually, and there was no progression of the disease to a severe stage. There were no adverse or unanticipated events.

4. DISCUSSION

The symptoms of COVID-19 can be correlated with *Kabasuram*, which is a *Kabam* predominance.[1] The medicines used for managing the condition had to be selected from a set of medicines which was mentioned for *Kabam* related diseases in

Siddha literatures. There are a large number of Siddha medicines that are currently in use for all types of *Kabam* related diseases which may prove to be effective for COVID-19.

Presently with COVID-19 patient was already known case of Bronchial Asthma for 5 years. The existence of underlying conditions, especially chronic respiratory diseases, may affect the progress, treatment and prognosis of COVID-19.[14]

DELHI WEATHER BY MONTH // WEATHER AVERAGES

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	14.2	16.9	22.6	28.4	33.3	34.1	31	29.7	29.1	25.7	20	15.7
Min. Temperature (°C)	7.3	10	15	20.7	26.2	28.4	27	25.9	24.4	18.5	11.6	8
Max. Temperature (°C)	21.1	23.8	30.2	36.2	40.4	39.8	35.1	33.5	33.9	32.9	28.5	23.4
Precipitation / Rainfall (mm)	15	11	15	3	12	44	217	271	114	27	4	

FIGURE 2–Delhi weather in December 2020 [16]

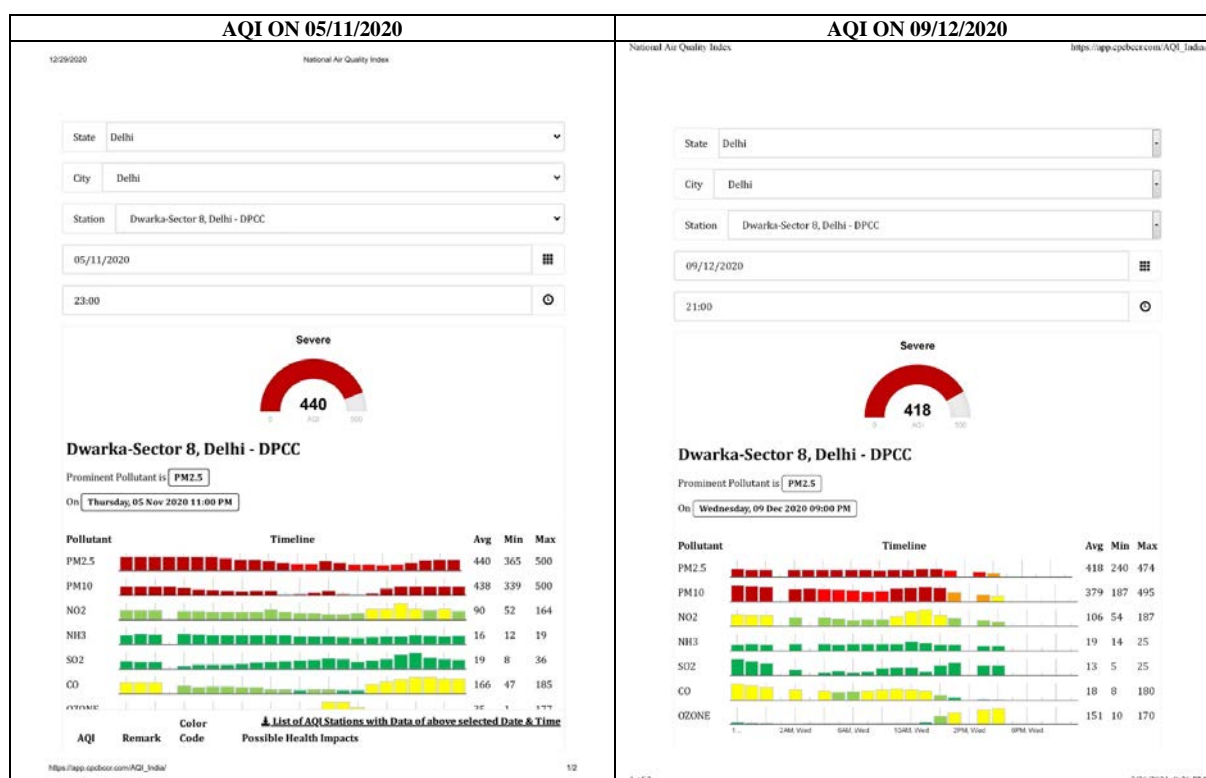


FIGURE 3- Delhi Air Quality Index from November 2020-December 2020 [17]

Since the patient had bronchial asthma as a co-morbid condition, both the winter season (Figure 2) and air pollution (Figure 3) are likely to increase the severity of the disease. Central pollution control board, Ministry of environment reported the air quality index in the area Dwarka where the patient resided has been very poor (AQI 300-400 approx.) during the months of November and December 2020.(Figure 3).

Exposure to air pollution especially NO₂ (Nitrogen Dioxide) and PM_{2.5} (Particulate matter the mass per cubic metre of air of particles with a size generally less than 2.5 micrometers) may increase the susceptibility of infection and mortality

from COVID-19. Air pollution can cause adverse effects on the prognosis of patients affected by SARS-CoV-2 infection. Air quality should be counted as an important part of an integrated approach toward public health protection and prevention to the spread of epidemics.[15]

Even though the above ancillary factors that increase the severity of COVID-19, the patient had responded well to the Siddha management. The patient was under follow up to assess the occurrence of post COVID complications for three months to till date. (23/03/2021).

5. CONCLUSION

SARS CoV-2 that mainly affects the respiratory system. In this particular case the patient has already affected by bronchial asthma as a respiratory co-morbid condition, both air pollution and winter are likely to increase the severity of the disease. Therefore, this case study reveals that Siddha treatment is more effective in the treatment of COVID-19 along with bronchial asthma as a co-morbid condition and also it prevents the deterioration of disease into a more critical condition. This is also a valuable opportunity for demonstrating the efficacy of Siddha intervention in this pandemic situation.

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