

A REVIEW ARTICLE ON “ROLE OF AYURVEDA BASED DIET & LIFESTYLE IN PREVENTION & MANAGEMENT OF COVID-19”

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ABSTRACT

The outbreak of COVID-19, an infectious disease which is caused by newly discovered Coronavirus, has created a global health crisis in the entire mankind. This virus is transmitted through direct contact with respiratory droplets of infected person (generated through coughing and sneezing), and touching surfaces contaminated with the virus. It produces symptoms like high grade fever, cough and shortness of breath. In more severe cases infection can cause breathing difficulties. Some people infected have mild COVID-19 illness, and others have no symptoms at all. In some cases however, COVID-19 can lead to respiratory failure, lasting lung and heart muscle damage, kidney failure or death. Till date, no medicine has been able to completely kill this deadly infection. The only solution to this problem is prevention. We all know that “Prevention is better than cure”. Therefore, by taking preventive measures which boost our immunity is the only way for fighting against COVID-19. The following article highlights the role of Ayurveda based diet and lifestyle in management and prevention of this deadly virus.

KEYWORDS: *Srotas, Vyadhikshamatva, Mahabhaisajya, Tridoshas, Ritucharya, Dincharya* etc.

INTRODUCTION

Coronavirus is a virus that causes an infection in nose, sinuses and upper throat. It is caused by SARS-CoV-2, a new type of coronavirus. It can affect upper and lower respiratory tract.

Symptoms may appear after 2-14 days after exposure to virus.

In Ayurvedic texts, there is description of Srotas which is defined as a passage or empty space where an entity passes with an apparent change in its constituents. Orifices of the Srotas are minute, spreading long and far away like lotus stalk. Through such channels Rasa circulates and nourishes cells and tissues. One such Srotas is Pranavaha Srotas. Due to vitiation of Pranavaha srotas following symptoms appear; Atisristamatibadham (difficulty in breathing), Kupitamalpam (shortness of breath), sabadshoolamuchhsasantam (pain and sound during breathing). These symptoms suggest involvement of respiratory tract. Thus, there is a strong evidence of Pranavaha srotas dushti in COVID-19 disease.

In Ayurvedic science prevention from etiological agents is basic principle of the treatment. Diet and lifestyle play very important role in such conditions where immune system of our body is working against the pathogens.

Thus, holistic approach towards COVID-19 disease can be helpful in its prevention and elimination.

DISCUSSION

India is a country with rich heritage of Traditional Indian Medicine, which has been practiced since ancient period of time. Ayurveda, being the holistic science of life propagates the gifts of nature in maintaining healthy and happy living. With the main objective “Preservation of health in healthy individual and eradication of disease in diseased individual” it emphasizes on the promotion of health through strengthening of host defence, which act as a resistive force against day-to-day physiological extremes as well as opportunistic maladies. This force to reckon with, as regards everyday wellness is termed as *Vyadhikshamatva* (Immunity) in Ayurveda. This concept of *Vyadhikshamatva* (Immunity) is of tremendous importance in the daily wellness of human beings for prevention and recovery from diseases. So, Ayurveda mainly focuses on the person, the host.

“Every seed that grow will not grow in every soil”, taking this as main focus Ayurveda believes in empowering the soil of the body so that the virus cannot take hold and this is pure personalized medicine at its best.

The Ayurvedic treatment mainly focuses on three components which are:

- i) Ahara
- ii) Vihara
- iii) Aushadi

i) Ahara

Ahara means diet and refers to regulating eating habits. Ahara is also called as "*Mahabhaisajya*" which means the superior medicine. As per Ayurvedic philosophy, everything in universe (even human body) is composed of five basic elements i.e "*Panch Mahabhutas*" which are space, air, fire, water and earth. Likewise, food is also Panchbautika; when consumed in appropriate proportions, can help in balancing similar elements in the body. The *ahara* should always be compatible with the prakriti (constitution) of individual and the seasons.

Diet (Ahara) for balancing Tridoshas

Our body's state depends on the three pillars i.e Tridoshas / Traya stambha (Vata, Pitta, Kapha). These doshas when occurs in state of equilibrium constitutes Arogya (state of health) and when vitiated gives rise to state of disease. State of equilibrium and vitiation of doshas depends upon various factors among which diet (ahara) is major factor. So, according to the condition of doshas in our body ahara should be consumed.

These are some foods that are considered helpful and harmful for each *dosha*:

Vata aggravating food: Dry fruits, apples, melons, potatoes, tomatoes, peas, green salads etc.

Vata beneficial food: Sweet fruits, apricot, avocados, coconut, bananas, grapes, asparagus, brown rice etc.

Pitta aggravating food: Spicy food, peanuts, sour fruits, banana, papayas, garlic, tomatoes etc.

Pitta beneficial food: Oranges, sprouts, bitter gourd, broccoli, fennel, leafy green etc.

Kapha aggravating food: Bananas, coconut, papaya, fig, dairy products etc.

Kapha beneficial food: Apples, dry fruits, green gram, kidney beans, parched rice, wheat etc.

Diet (Ahara) and seasons

Acharyas has clearly mentioned that the food should be compatible with seasons and accordingly they described the whole regime of food during different seasons under *Ritucharya*-seasonal regimes. For example.

Summer – During summer, when the temperature is high, people tends to sweat excessively. At such time of year, *pitta dosha* usually predominates. So, it is recommended not to eat hot, spicy and pungent food. Instead cold and light food is recommended.

Winter – Winter is the season which brings cold and snow. During this season, the *sancaya* (accumulation) of *kapha dosha* occurs. So, during this period cold drinks, ice-cream, cheese and yogurt should be avoided.

Ayurvedic science believes that we are what we eat. Food is very important for nourishing not just the body, but also the mind and conscience. Hence, the time of eating, the right kind of posture while eating and amount of food consumed matters equally as much as the type of food eaten. A balance diet and healthy daily habits can contribute profoundly in treatment or prevention of diseases. Hence, during this period of pandemic, food which is compatible to our prakriti and seasons should be consumed in appropriate quantity.

ii) Vihara

Vihara refers to lifestyle. Lifestyle is a cumulative product of our natural physical capacity at co-ordination with its mental functioning; consisting of habits, behavior, everyday diet and living pattern and the environment in which we grow. By practicing a healthy *vihara* we can achieve and maintain healthy living (*Arogya*). So, following are some healthy practices which are recommended in Ayurveda:

a) Dinacharya (Daily regimen)

Dinacharya means healthy and sustainable pattern of lifestyle. To achieve this, Ayurveda prescribes specific routine in general, also taking in consideration the *prakriti* or constitution of every individual. *Dinacharya* practices include waking up early in the morning, elimination of our natural wastes, maintaining oral hygiene, exercising regularly, body massage, bathing, clothing, eye care, nasal care etc. It covers the complete regime of personal hygiene.

b) Ritucharya (Seasonal regimen)

According to Ayurveda, the three *doshas* and the *ritus* (seasons) are interlinked. Health is affected by the nature and climate of outer environment. For example, when the air is damp, cold and wet, it increases these qualities in the body leading to aggravation of *kapha dosha*. This gives rise to cold and cough during winter. Thus, we need to change our diet and lifestyle practices in response to climatic or seasonal changes.

Since, it is clear that COVID-19 is spreading at an alarming rate during this present season of *Vasant ritu*, so owing to its *kapha prakopa* nature which mainly produces respiratory system symptoms following practices should be followed

1. Drink warm water throughout the day.
2. Use of *Haldi* (Turmeric), *Jeera* (Cumin), *Dhaniya* (Coriander) and *Lasun* (Garlic) in cooking.
3. Hot water gargling at morning and steam inhalation with eucalyptus oil at evening.
4. Drink herbal tea or decoction (*kadha*) made from *Tulsi* (Basil), *Dalchini* (Cinnamon), *Kalimirch* (Black pepper), *Shunthi* (Dry ginger) and *Munaka* (Raisin) once or twice a day.
5. Daily practice of *Yogasana*, *Pranayama* and meditation for at least 30min.

c) Nidra (Sleep)

Quality sleep recharges and nourishes the mind. During this phase of pandemic, it is normal to feel stressed. So, encouraging the healthy lifestyle of sound sleep of about 7-8 hours at night is very much essential. Preferably, day time sleep should be avoided as the day time sleep aggravates the *kapha dosha* leading to development of *kaphaj* diseases. It is also found that sleeping during day time decreases immunity of the individual. Therefore, regular pattern of quality sleep should be followed for healthy state of mindfulness which ultimately helps in developing good immune system in our body and preventing the emergence of disease.

d) Yoga and Dhayana (Meditation)

“Yoga” in Sanskrit means “union”. It means the act of combining the physical self with the mind through exercise. *Yoga* stimulates concentration and can help to eliminate toxins from our body. It is also known to produce harmony between body and nature through three basic aspects of human elements; the mind, mental, spiritual. This helps to improve immunity and build resistance against diseases. *Yoga* contains several forms of exercises such as *Yama*, *Niyama*, *Asanas*, *Pranayama*, *Pratyahara*, *Dharana*, *Dayana* and *Samadhi*.

During this period, *Pranayama* (Breathing process) should be practiced for 5-10 min four times a day as COVID-19 virus mainly targets the respiratory tract and the *Pranayama* helps to clean the respiratory tract thereby reducing the possibility of any respiratory tract symptom or disease.

Moreover, practicing *Pranayama* prevent any person from undergoing ventilation, if attacked by COVID-19. Therefore, following breathing exercises should be done:

- Deep abdominal breathing first in supine and later in prone position.
- *Kaphalbhati pranayama* for 2 min followed by deep breathing for 5min.
- Forcefully coughing to empty alveoli followed by deep breathing exercises.

In addition to this, following *Yogasanas* should be performed for 5-15 min per day. They enhance the immunity, keep hormonal and cardiovascular system in balanced state and overall strengthen respiratory and other internal organs and systems, as to fight against corona virus.

- *Gupta Padmasana* (Hidden lotus pose)
- *Supta Vajrasana* (Sleeping thunderbolt pose)
- *Matsyasana* (Fish pose)
- *Sarvangasana* (Striking cobra pose)
- *Ardh Matsyendrasana* (Half spinal twist pose)

While *dharana*, *dayana* and *samadhi* are pure meditation exercises to keep the mind at peace.

Therefore, by practicing the healthy *vihara* (lifestyle) in

accordance to our prakriti and seasons, the body *doshas* will remain in equilibrium and the immunity of the body is boosted thereby preventing the development of any disease.

iii) Aushadhi

During this COVID-19 outbreak, apart from maintaining the social distancing, personal hygiene, it can be managed and prevented by increasing the immunity. In Ayurveda, this concept of immunity boosting (by use of *Rasyana*) is mentioned from very early time specifically from the time of *janapada-uddhavansa* (epidemics) which is mainly caused by impure air, water, land and time. So, Ayurveda mainly approaches the disease from the perspective of air, water, land and time.

Therefore, cleansing of the air should be done by fumigation, burning divas and burning of herbs, especially those with anti-viral properties. Burned *ajwain* can be used for *dhoopana*, along with *neem*, *haldi*, *garlic* and onion peels, and coconut husk. These herbs therefore can be used for fumigation which precipitates the germs that hover in the outer air.

Water should be boiled and warm water should be used for drinking purpose.

Land can be kept clean by removal of inorganic waste, planting trees, leaving water and food for birds, and consciously ensuring that the space breathes clean air regularly.

The awareness of time is developed by regular meditation, yoga and appreciation of quiet and calm.

To prevent illness, Ayurveda says to keep gut clean. Therefore, use of 1 tsf of *Triphala* with hot water is taken at night. This allows to have large bowels movement daily and get the clean gut.

Since, the Corona virus mainly attacks on *Pranava srotas* (respiratory tract), the *Pranava srotas* should be kept clean. Decoctions (kwatha) at sunrise and sunset should be consumed as decoction cleanses the nasal passages by stimulating the bitter taste buds, which turns on the airway machinery. For more specific symptoms, such as lower airway breathing difficulty, middle airway asthma or upper airways, special formulations such as *Soma Asava*, *Agasthya Haritaki Rasayan*, *Pushkarmoola Asava*, *Vasa Avaleha*, and *Chitraka Haritaki* should be taken.

Following are some single herbs which should be taken to boost the immune system of the body:

These herbs help to increase the production of interferons and antibodies to generate immune response against the viruses and increases the rate of phagocytosis to destroy microorganisms, thus increasing the immunity from containing viral infection.

1) Guduchi

Botanical name – *Tinospora cordifolia* Family – Menispermaceae

Chemical constituents – Alkaloids, glycosides, steroids, tinosporide, berberine.

Mode of Action – *T. cordifolia* alters level of enzyme such as catalase, stimulate lymphocyte cell thus maintaining immune strengthen.

2) Kalmegha

Botanical name – *Andrographis paniculata*
Family – Acanthaceae

Chemical constituents – Andrographine, Andrographolide, Neoandrographolide, Panicoline, steroids, phenols, terpenoids, alkaloids, saponins, flavonoids.

Mode of Action – Andrographolide present in Kalmegha possesses broad-spectrum anti-viral properties which significantly decreases the production of cytokines and pro-inflammatory factors in viral infection.

3) Ashwgandha

Botanical name – *Withania somnifera* Family – Solanaceae

Chemical constituents – Withaferin A, withasomniferin A, sominone, sominolide

Mode of Action – Researches have shown that *W. somnifera* enhances WBC count and phagocytic activity of macrophages in mice.

4) Adhtrak

Botanical name – *Zingiber officinale* Family – Zingiberaceae

Chemical constituents – Zigirol, phellandrene, phenolic compounds (zingeron, shogaol)

Mode of Action – Ginger is one of the most effective natural immunomodulator. In vitro study found that ginger inhibited lymphocyte proliferation. This is mediated by reduction in IL-2 and IL-10 production. It is a strong antioxidant and naturally helps to boost immune system, kills the cold virus and detoxes systems by relaxing intestinal tract.

5) Tulsi

Botanical name – *Ocimum sanctum* Family – Lamiaceae

Chemical constituents – Eugenol, β -caryophyllene, corvacrol, ursolic acid.

Mode of Action – It modulates the humoral immune system by acting at various levels in Immune mechanism such as antibody production, release of mediators of Hypersensitivity reactions and tissue response to mediators in target organ.

Similarly, herbs like *yastimadhu*, *draksha*, *lasun*, *marich*, *haridra*, *dalchini* can also be used as immuno-boosters.

Apart from these single herbs, multi - drug combination can also be used for boosting the immunity. These are:

- Sanjeevani vati
- Fifatrol (a multi drug combination of mritunjaya rasa, sanjeevani vati, tulsi, giloy).
- Chyawanprash

CONCLUSION

Thus, by following above listed Ayurvedic principles of *Ahara*, *Vihara* and *Aushadi*, we will be able to boost the immunity and possesses the preventive power against the Coronavirus thereby gaining a healthy state.

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