



COVID-19 Menace: Stepwise Measures with Respect to Diet

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ABSTRACT

Human being all over the world is suffering due to the recent outbreaks of COVID-19 and prevention of viral infections emerges as a critical issue in safeguarding public health. According to Ayurveda, COVID-19 is considered as an Agantuja Jwar in which Agantu (outside) agent attacking the body. It is Sansargajanya (Aupasargika Roga) causing epidemic or pandemic infection. As no treatment is found effective, diet plays an important role to improve immunity towards viral diseases. Relevant references were searched related to diet described in Ayurveda treatises. Scientific research papers related to clinical studies on dietetic drugs were also searched. The concept of balanced diet for healthy living has been explained by various Acharyas of Ayurveda, Acharya Kashyapa mentioned that the stability of an individual health is dependent on Ahara and there is nothing best except diet for sustaining the life of human beings. He has also equated Ahara as Bhashajya (medicine) and nothing else is considered as Mahabhashajya (Superior Medicine). Here treatment is suggested as per symptoms available through patients and as per Ayurveda, dietary habits followed during COVID-19 and boosting immunity to fights against pandemic diseases through yoga and Rasayana Chikitsa.



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INTRODUCTION

Being health conscious, many people eat proper food for good health and follow specific daily rou-

tine for their healthy leaving. Contrary to this some people neglect the daily routine, don't follow the eating habits and fall sick quite often due to the lack of immunity power commonly termed as Vyadhikshamatwa in Ayurveda (Kumar, 2013). Vyadhikshamatva (immunity) is having prime importance in the daily wellness of human beings for prevention and improvement from diseases (Singh and Verma, 2012). In Ayurveda Acharya has described various codes of conducts for all age group people to follow in different seasons, during diseased as well as healthy conditions interms of diet (Ahara) and mode of life (Vihar). Acharya Kashyapa mentioned that the stability of an individual health is dependent on Ahara and there is nothing best except diet for sustaining the life of human beings. He has also equated Ahara to Bhashajya (medicine) and nothing else is

said to similar to Ahara which can make a human disease free hence food is considered as *Mahab-heshaja* (superior medicine); (Ahire and Kashikar, 2014). No matter how good or efficient medicine may be available to treat the diseases one cannot sustain without Ahara. Thus conception of balanced diet is an absolute necessity to maintain proper nourishment to all Dhatu of the body. Nutritious diet is very important during infectious condition. During infection especially when there is fever, the body needs additional energy and nutrients. Therefore, maintaining a healthy diet is very important during the COVID-19 pandemic. It includes proper nutritious diet (Satmyaahara) regular proper sleep, exercise, yogic Asanas following Achara Rasayana for promoting mental and spiritual strength (Ministry of Ayush, 2020). In fact, poor diet quality has been associated not only with physical but also mental health (Hislop et al., 2006). The nutritional status of individuals have been considered as an indicator of resilience against destabilization (Naja and Hamadeh, 2020).

MATERIALS AND METHODS

For the present study, relevant references were searched from authentic Ayurvedic texts like Kashyapa Samihita, Charak Samhita, Ashtang Hriday and guidelines of Ministry of AYUSH for COVID-19. Scientific research papers related to diet and clinical studies on dietetic drugs were also searched.

OBSERVATION AND RESULTS

Ayurveda has suggested the diet according to the disease condition and digestive capacity of the patients. According to the modern science, stages of the COVID-19 is as follows,

1. Quarantine patients (Either Corona positive or suspected asymptomatic cases)
2. Diseased stage (Symptomatic ICU patients or Critical patients)
3. Post diseased condition (Asymptomatic patients in recovery condition)
4. High risk patients (with some chronic diseases)
5. General public

Quarantine patients (COVID-19 positive or suspected asymptomatic cases)

Patients having symptoms like cough, sneezing, bodyache, hoarseness of voice, mild fever etc and

prevention through Swasthavrutta and Ahara (Diet) as follows

Suggested Diet

Light diet (LaghuAhara) – Mung dal soup prepared with herbal drugs like Turmeric (*Curcuma longa*), yavagu (Rice porridge) (Mishra et al., 2017) Jowar roti, vegetables like various gourds, pumpkin. Avoid dairy products and other milk products, roots like potato, sweet potato etc. Avoid fast foods and ice-creams, cold drinks. Increase intake of fruits having rich in vitamin C which helps to boost immune system.

Rasayana treatment

Rasayana like Vardhamaan Pimpali Rasayana-Kas, Shwas, Galgraha, Vishamajwar, Vardhamaan Guduchi Rasayana Chyavanprash rasayana (Rathi et al., 2018). Vardhamaan Musta Rasayana, Vardhamaan Triphala Rasayana, Shilajeet Rasayana, Khadiradi Rasayana and Shatawari siddha ghrut (Singh et al., 2014) are also helpful in boosting immunity. Combination of Medicines like Sitopaladi Churna, Yashtimadhu churna (*Glyceriza glabra*), Kantakari (*Solanum virginianum*) powder should be advised with juice of ginger and honey for 3-4 times a day.

Diseased stage (Symptomatic ICU patients or Critical patients)

Patients having symptoms like cough, high grade fever, bodyache, pain in throat, etc At this level, there may be three stages

1st stage - Vata-Kaphaja Jwara (Fever)

2nd stage - Vata-Kaphaja Sannipatika Jwara(Fever)

3rd stage – Jwara with Shwasa (breathlessness), Urdhwarga raktapitta (Blood vomit)

Prevention and treatment through *Swasthavrutta*– Following rules to maintain proper health in the symptomatic condition at every stage

1st Stage - Vata-KaphajaJwara (Fever)

Diet

Warm water, Coconnut water, *Buffalo Milk*, *Curd*, *Navanita* (Butter), Ghee, Tila taila, Sarshapa taila, Draksha, Dadima, Amalaki, Ripe Mango, Banana, Palandu, Lasun, *RaktaShali*, *Godhuma*, *Masha*, *Saindhava*, *hingu*, *pippali*, *Shunthi*, *Shashtikashali*, *Tila*, *Ajamamsa*, Fish, other aquatic animal meat, Mamsa Rasa and Mudga (Bhat et al., 2016).

Pathyadi Avaleha, for fever and pain in throat, Lakshminarayana Churna with Godanti, Vyagradi Churna, Mamsapachak churna, Chandrakalaras (Talawar, 2015).

2nd Stage -Vata-Kaphaja Sanipatika Jwara (Fever)

Diet

In this stage the diet should be followed as per mentioned in 1st stage.

3rd Stage - Jwara with Shwas(breathlessness), Urdhwarga, Raktapitta (Blood Vomit)

Diet

Water which has been boiled and cooled, sugarcane juice, Cow's milk, coconut water, Navanita (Butter), Onion, Banana, Narikela Taila, Shali Rice, Raktashali, Godhuma, Mudga, Tanduliyoka, Draksha, Amlaka, Dadima, Saindhava, Sharkara, and Ghee.

Post Diseased Condition (Asymptomatic patients in recovery condition)

Reduce the symptoms like fever, breathlessness, bodyache etc. Prevention and treatment through Swasthavrutta, Following rules will help to maintain proper health.

Diet

Take light diet, add spices like ginger, garlic, turmeric and capsicum and increase more salad in daily diet. It helps to boost immunity. Mungdal soup with Jowari roti, less rice or avoid rice or may be prepared with herbal medicines. Avoid dairy products and other milk products, Maida, roots like potato, sweet potato etc.

High Risk Patients (With Some Chronic Diseases)

Patients having no symptoms of COVID 19 but are in the average of high risk having some chronic diseases like hypertension, blood pressure etc.

Diet

Prefer light diet. Add probiotic rich fruits like pickles and antioxidants in daily diet. Jowari roti/chapati, less rice or may be prepared with herbal medicines. Vegetables like guards, homemade food. Avoid outside foodstuff, stale food like biscuits etc. Avoid dairy products and other milk products.

General Public

Prevention and treatment through *Swasthavrutta* – Following rules to maintain proper health

Diet

Follow same diet schedule as mentioned in 4th stage.

Immunity building treatment

Chyavanprashavleha, Bramhirasayan, Agastihari-taki avaleha, pippali, Bala Rasayan are some examples of Rasayan kalpa to improve immunity (Rathi

and Rathi, 2020). According to Charaka it can be used as diet. Bramhi ghrita for mental calmness can be used for patients in quarantine stage. All these regimens can be followed with WHO guidelines in all quarantined or suspected patients or in general public. Common regimen for above stages (for the above patients with 1, 2, 3 stage).

1. Take Luke warm water
2. Keep the patient in warm conditions
3. Wear warm clothes
4. Avoid cold air or water (as per Prakruti)
5. Take warm food (Avoid cold food)
6. Gargles with Turmeric (Curcuma longa), Triphala and Yashtimadhu (Glyceriza glabra)

Out of the Tridosha, Kapha gets aggravated during the period of March and April (commonly known as spring season). Hence during this season, it is advised to take light and easily digestible food and heavy (guru), unctuous (snigdha), sweet (madhura) diet and day sleep (diwaswapa) is contraindicated. During summer season (month of June & July) due to the extremely scorching weather sweet, cold, liquids and unctuous diet and drinks are prescribed. The food which is salty, sour and hot should be avoided. During rainy season (month of August & September) the digestive power in general weakens and in order to regain the normal digestive power it is advisable to take old barley, wheat, shali rice along with animal meat and vegetable soup (Nishteswar, 2016).

Diet and lifestyle are extremely important for the nourishment of the body and management of diseases. The extent of dietary intake depends upon digestive capacity i.e. Agnibala. That's why small quantity and easily digestible food is advised to the patient. Likewise body, diet is also made up of five basic elements i.e. *Panchamahabhuta*. Diet poses all six rasas (tastes), which promotes specific diversified effect of nourishment on the body. Diet deficient in any of the five basic elements/ six tastes may lead to nutritional deficiency state and causes diseases in due course of time. In this context not only physical components of a diet are important but accurate planning, mixing of food articles, method of preparation, quantity, method of ingestion of food and above all good mental states are extremely important. This is the underlying fact behind the principles of 'Astavidha Aahara Vsesayatana' (dietary rules) described by Charaka and 'Dwadasa Aasana Vicara' (12 considerations during

food intake) described by Sushruta (Chitrakar and Bhapkar, 2018).

DISCUSSION

According to Acharya Kashyapa, health of human being is dependent upon the consumed food and responsible for individual's immunity. Keeping awake till late night, eating junk food sleeping during daytime, mental stress and holding the natural urges are few reasons to weaken the immune system (Rathi, 2013). When immune system becomes very weak in viral diseases like COVID-19, along with antiviral drugs, diet plays an important role to improve patient's health status. The word Pathya gets its origin from the root word 'Patha' which literally means a way or channel. The substances which are not contradictory to Strotas is called as Pathya (Chandaliya et al., 2015). The substance or regime which do not adversely affects the body and mind is Pathya (Wholesome), those which adversely affects are considered as Apathya (Unwholesome). Acharya Charak has stated that the wholesome food is one of the causes of growth and well being while unwholesome food is root of all diseases (Tiwari and Badwaik, 2018). Charak has also counted food in Trayoupastambha in Ayurveda. No medicine can equivalent the benefits of food in diseased state i.e only wholesome food can keeps the person healthy. Acharya Sushruta has emphasized on Hita- Ahita ahara, Acharya Harita stated the importance of Pathya and Apathya by stating that, if the person ignores the Pathya and Apathya then illness will never depart from the body (Masram et al., 2014). In Yogratnakar, drug, treatment and Pathya are the three important factors, mentioned for treating the diseases. Also along with Ahara, Charak has given equal importance to Vihara i.e Pathya vihara (wholesome routine). Pathya and Apathya according to Doshawastha have also been advised by Acharya which can be considered under specific Prakruti. The Ahara vihar opposite to Doshatik prakruti of person proves to be Hitakar as well the person who is having Samadhatu Prakruti all Rasa can be taken. Logical modification of Dinacharya, Ritucharya as per Prakruti of an individual can also be called as Pathya. The diet which is having opposite qualities of Deha (Prakriti) and Dhatu will act as Viruddha to all Dhatu. Eg: Guna Viruddha, Desh Viruddha, Kala Viruddha, Matra Viruddha, Samskar Viruddha, Swabhav (Prakruti) Viruddha (Deshpande and Deshmukh, 2019). So any sort of Viruddha will act as Apathya for any prakruti so according to Ayurveda diet (Ahara) considered as Mahabhashajam, diet should follow to prevent like COVID 19 pandemic disease.

CONCLUSION

Understanding importance of Ahara, Pathya and Apathya according to various Acharya, Ahara plays important role to prevent disease for good health and balancing Doshas and their effects can help to reduce pandemic disease (COVID-19) and enhancing immunity to fight against the disease. Prevention and diet helps to control the disease and save the nation. The changes in dietary habits during the outbreak of COVID-19 need to be corrected. Compelling evidences showed that dietary habits are affected by conditions of stress, distress and emotional disturbance. Hence dietary instructions (pathya) and lifestyle modifications are to be followed strictly to check further progression of the COVID-19 disease.

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Conflict of Interest

The authors declare that there is no conflict of interest.

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