Concept of infectious diseases in Ayurveda

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ABSTRACT

COVID-19, a disease caused by SARS-Cov-2 virus, has become pandemic and is spreading widely across the world, and resulted in deaths of millions in just few months. Statistically, it is noted that worldwide deaths has occurred due to outbreak of infectious diseases. There is list of epidemics caused by infectious diseases like Ebola, Severe Acute Respiratory Syndrome (SARS), swine flu, bird flu, etc. But, spread of COVID-19 is much more remarkable in very short period of time. Modern system of medicine, do not have any definitive management. Now, we need to think about other systems of medicine to break this chain. So in Ayurvedic perspective, the COVID-19 can be considered as Aupasargika / AgantujaVyadhi (Infectious disease). Present study aims to understand the principles of Ayurveda, in view of concept, epidemiology, etiopathology, prognosis, prevention and management of infectious diseases. It comprises of probable approaches of infectious diseases through Ayurveda. References established on data pertaining to available in Ayurveda classics, modern texts, peer review journals regarding the same. The speedily spread of COVID-19 is due to indulgence in the etiological factors, by people of this era. The onset period of this pandemic was VasantaRutu (spring), hence KaphaPrakopa (vitiation of Kapha) is there. And the further pathogenesis is like Shwasanaka Sannipatika Jwara (fever due to vitiation of all humors). So, Panchakarma (Internal purification), Rasayana Chikitsa (Rejuvenating treatment) and Sadvrirtta (Good regime) can be included in the management of such diseases. From this study it can be concluded that disease is produced due to an imbalance between physical and mental elements, as it reduces resistance of body against disease. If we cure or prevent this imbalance and the strengthen host’s defense system by Ayurvedic drugs, lifestyle modifications, and diet modifications, the body will be immune to diseases.

Keywords:
Agantuja Vyadhi, Ayurveda, Corona virus, Covid-19, Infectious disease, Shwasanaka Jwara

INTRODUCTION

‘Infectious diseases are caused by pathogenic microorganisms, such as bacteria, viruses, parasites or fungi; the diseases can be spread, directly or indirectly, from one person to another’ (WHO, 2020). We are surrounded by hundreds of microorganisms, inside and outside our body. Most of them are harmless, and some are even helpful. But, under certain conditions, pathological microorganisms can cause disease (Infectious diseases, 2020). In present situation, COVID-19 that is novel corona...
virus disease has become threat for mankind. It was named so, because first case of COVID-19 was found in December 2019 in Wuhan, China. The corona virus is also called as SARS-Cov-2, as it causes infection of respiratory tract. In March 2020, World Health Organization (WHO) declared COVID-19 as pandemic officially (WHO-COVID-19, 2020). Till 13th April 2020, 1773084 confirmed cases of COVID-19 were reported globally, with 111652 deaths. While in India, are more than 9000 positive test cases and 308 deaths ((COVID-19 Situation Report - 04, 2020).

The COVID-19 epidemic is spreading speedily across the world. Previously many diseases have spread in the world like SARS, chickengunya, Bird flu, Swine flu etc. Many such new diseases will come and go, but does Ayurveda find something common in them? Does Ayurveda have principles for the etiology, pathogenesis, and treatment of these diseases? The answer is, yes. Ayurveda is the science of life, which aims primarily on maintenance of health. Health of a person includes physical, mental, and spiritual health, all together. This is to say, with very responsibility, and valid reference that, Ayurveda is born to treat the epidemic diseases caused by the infections from micro-organisms.

The theory in the Ayurveda classics, behind the origin of infectious diseases

In Krutayuga (Era of Truth), Lord Shiva created an organism, which was materialistic, and named it as ‘Jwara’, to destroy the Yadnya (Holy worship) of Lord Daksha. But after this destruction, Krodha asked Lord Shiva, “What should I do now?” And Lord Shiva told him to go to Earth, and produce Jwara (diseases) in all living beings. He also told him, to be present at the time of Birth, and Death, and create disease in those who experiences etiological factors. Here the term Jwara means Disease (Pravritti disease, 2020).

Etiopathogenesis of Infectious diseases in Ayurvedic view

The living beings, not having vitiated humors in the body, do not get Jwara (disease) created in their body. This implies that, those having vitiated humors in body will get a disease (Jwara Chikitsa, 2020). This sentence may seem simple, but Acharya Chakrapani has a commentary on this line that, the term ‘Samupasevate’ used instead of ‘created’, which implies that, the micro organism enters in body, and creates the disease. This ultimately implies that, only those who are having vitiated doshas in body will get infected by micro organisms; or those who are not having vitiated doshas in body, will not get infected by micro organisms.

So, we can say that, first disease was formed due to infection of micro organism, in the body. But Rishis (experts) in that era further noticed that, some people coming in contact with the diseased are getting the disease, but some are not getting the disease. And they started a research to solve this question. And, they came to a conclusion that, there must be some factor in the body, which after vitiation creates disease in the body, to which they named ‘Dosha’ (Humour). So, Ayurveda tells that, even after the entry of micro organisms in human body, disease is not created in the body, until and unless there is vitiation of the humors. There may be some mild signs, but the pathogenesis will not go further to form a disease. So, vitiated Doshas is the root cause of all the Infectious diseases (Jwara Chikitsa, 2020).

Classification of diseases as per Ayurveda

Grossly, diseases are classified in two types namely, communicable and non-communicable diseases. While all communicable diseases are infectious, not all infections are communicable (Agrawal and Swami, 2019). According to Ayurveda; there are basically two types of diseases namely, Nija (Endogenous) and Agantuja (Exogenous) diseases (Diseases, 2020). According to Acharya Charaka, Agantuja Jwara (infectious diseases) is caused by Abhighat (trauma), Abhishanga (close contact), Kama (Sex), Abhichara (association with evil) and Abhishapa (wrath of the wise and the elders) etc., (Agantu Jwara, 2020). In the commentary by Acharya Chakrapani, he states that, apart from these, Bhutabhisangha (Contact with invisible organisms) is also a cause of the disease (Parauha et al., 2016). This proves role of infectious microorganisms in pathogenesis of Agantu Jwara.

According to Acharya Charaka, Kshaya/Rajayakshma(Tuberculosis) has 4 etiologies, namely Sahasa (Excessive physical exertion),Vishamanshana (Inappropriate intake of food), Kshaya (Emaciation), and Vegavardha(Suppressing the natural urges). Kshaya is also mentioned of two types, namely Anuloma(Ascending order)andPratiloma (Descending order). While explaining Anuloma Kshaya, Acharya Charaka says, due to etiological factors, Rasavaha Strotasa Dushpi(vitiation in circulatory system) occurs, especially Kshaya of Hridayastha Rasa(Pathogenesis in heart) occurs. If this continues, next Dhatus(tissues) will also get emaciated, and patient will end up in Kshaya Vyadhi. And if this shosha is not treated, then the patient is infected with microbes (Wasting as cause, 2020). This means Shosha, which was a Nija Vyadhi, is
converted to an Agantuja vyadhi. Agantuja Vyadhis are those where the vitiation of humors occurs after development of symptoms, unlike Nija Vyadhi, where symptoms are developed after vitiation of humors.

So, the disease COVID-19 can be placed in Agantuva Vyadhi according to Ayurveda. The virus will invade the body, but symptoms will be developed only if the humors are vitiated. In other way, COVID 19, follow a pathogenesis that, the virus enters the body, then vitiates the humors, and the symptoms will develop. Both the pathogenesis is applicable. Hence Acharya Charaka says, Agantuva Vyadhi further gets converted to Nija, and Nija Vyadhi further gets converted to Agantuva (Agantuva Jwara, 2020). So, in initial stage diseases are in either form(Nija or Agantuva), but shows both the forms, in later stage.

**Prevention of infectious diseases in Ayurveda**

The first treatment principle of Ayurveda is prevention. There are some preventive majors explained in Sadvritta(good regime), which play a vital role in preventing infectious diseases (Singh and Sadvritta, 2017). As COVID-19 is transmitted by droplet infection and it is an airborne disease, one should take some precautions as follows

1. One should not yawn, sneeze, and laugh without covering the mouth (Codes for following natural urges, 2020).
2. One should not let out mucous nasal excreta at the time other than cleaning of face or bath (Codes for following natural urges 2020).
3. And also person should keep far away from other persons to prevent inhalation of expired air from them.
4. One should apply oil to head, ear, nose and feet daily, try to purify air and one should not scrap or broom the roof (Sadvritta, 2020).
5. One should follow Respiratory hygiene and cough etiquette, which are infection prevention measures to decrease the transmission of respiratory illness (Singh and Sadvritta, 2017).
6. To prevent this pathogenesis, we can gargle with warm Kwatha(decoction) of Triphala or Yashtimadhu (Herbs) Nasya (Nasal insufflations), like Pradhamana Nasya(Nasal insufflations of powder of herbs ), Snana(bath) with Siddha Jala(water purified with herbs), consumption of boiled water, or Jala Siddha with Triphala, Yashtimadhu, Sariva, Sunthi, Nagarmotha (water purified with these herbs), etc.

**Management of infectious diseases in Ayurveda**

All the symptoms mentioned as symptoms of Rajayaksma, are similar to those of infectious diseases. So, if we want to treat infectious diseases by Ayurveda, we have to follow treatment given in Rajayaksma disease, by Acharya Charaka. Some formulations are, like Sitopaladi Churna, Agastya Haritaki, Samshamani Vati; Mahasudarshana Ghana-vati etc. can be given.

So, Panchakarma (Internal purification of body), Rasayana Chikitsa (rejuvenation therapy) and Sadvritta (good regimen) can be included in the treatment regime of such diseases.

**Concept of Epidemiology in Ayurveda**

Acharya Charaka also mentions about epidemics in his literature, in ‘Janapadodwansaniya Vimana Adhyay’. Epidemics have potential to bring destruction of all people, no matter how different they are from one another. Air, water, land and season, are common factors to all living beings and individual differences in humans having no impact on them. These four factors can be attributed to modes of spread of infection described in modern science. Janapadodhwans(a epidemic)occurs due to vitiation of Vayu(air), Jala (water), Desha (soil),and Kala(season). To prevent this condition, it is important to stay at safe place, where air, water, soil, food etc. are in good condition (epidemics, 2020).

As in this year 2020, rainy season has extended longer; the features of particular season are not seen properly. This has resulted in vitiation of food items, water, soil, air, herbs, etc. It is a favorable condition for COVID-19 like infectious diseases.

**Common etiological factors of Infectious diseases in Ayurvedic view**

The etiology of Sannipatika Jwara (a type of fever), is quoted as faulty food habits (including excessive fasting or intake of wrong quantity of food or at wrong time or before the digestion of previously taken food), use of contaminated water or poisonous food, improper intake of Panchakarma (Internal purification therapy), residing in unpleasant and harmful environment, unnatural smell or vapor intake, etc. (Sannipatika, 2020). If one follows these causative factors injudiciously, first they develop vitiation of Jatharagni(digestive power). The viti-ated Agni (digestive power) leads to improper digestion of food, and forms Aama (indigested food), which circulates in the Dhatus (tissues). This viti-ated Aama can’t nourish the tissues, so Dhatu Kshaya(emaciation of tissues) occurs and the immunity of the body decreases.

Contaminated waters, intake of contaminated
food, breathing in contaminated air can develop epidemics like Jwara, Shosha, etc. as seen in recent diseases like COVID-19. Decreased immunity, can lead to Stroto-Dusti(Pathology of channels in body), which cause Doshas-Dushya-Sammurchhana(pathogenesis of the disease) in PranavahaSrotasa(Respiratory tract)and develop symptoms like cough, rhinorrhoea, difficulty in breathing, etc.

For the formation of disease in body, host’s immunity plays vital role, than the infecting micro organism. If all of the factors come altogether, like epidemic, indulging of etiological factors by host, depletion of Dhatus, disease will occur, within very short time.

Reason behind speedily spread of COVID-19 like infectious diseases is, indulgence in the etiological factors, by people of this era. The period of this pandemic was Vasanta Rutu (spring), hence Kapha Prakopa (vitiation of kapha) is there. All symptoms in COVID-19 are of Saama Kapha Pradhana, Tridosha Prakopa(Vitiation of all humors). And the further pathogenesis is like Shwasanaka Sannipatika Jwara(fever due to vitiation of all humors). So, Panchakarma, Rasayana Chikitsa and Sadvrittacan be included in the treatment regime of such diseases.

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CONCLUSIONS

In Ayurvedic point of view, the present study on COVID-19 pandemic concludes importance of maintaining equilibrium of Doshas for maintenance of health. Ayurveda explains concepts of Vyadhikshamatva(Resistance to disease formation) and Janapaddhwansa for prevention of such diseases. According to Ayurveda, disease is produced due to an imbalance between physical and mental elements, as it reduces resistance of body against disease. If we prevent or cure this imbalance and the strengthen host's defense system by Ayurvedic drugs, lifestyle modifications, and diet modifications, the body will be immune to a disease.

It is interesting to note that, the principles described centuries back are very much relevant at this present era, and their importance cannot be neglected. But the principles described need to be compiled, analyzed, and interpreted as per modern principles of epidemiological diseases.

Conflict of Interest

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