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RESEARCH ARTICLE

COVID 19 AND UNDERSTANDING ROLE OF VYADHIKSHAMATVA (IMMUNITY) AS PER AYURVEDA WITH SPECIAL REFERENCE TORASAYAN

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Abstract

The whole world is suffering from the disaster of the disease caused by a microorganism Corona virus named as SARS COV2. No treatment and vaccination is available and only prevention is the way by adopting social distancing as it is a very highly contagious disease. This pandemic enforced us to think about the ancient medical science Ayurveda, the science of life in a revised manner. As Ayurveda has stated many therapies and drugs which empower immunity. Acquired immunity is the weapon for keeping oneself away from infection. Vyadhikshamatva explained in Ayurveda is the same factor. By increasing Bala, Ojus and adopting way of living as directed by Ayurveda enhances immunity. Immunity is strength to prevent or fight against the disease. Rasayana branch deals with immunity boosting. Keeping all these views in mind a thorough study of literature available in ancient textbooks of Ayurveda, different advisories about immunity boosting directed by government of India, information available on online media is done and it can be said that Ayurveda can help to improve and adopt immunity in a very easy and fast acting manner. Ayurveda is not only the science to cure disease but it also help to live a healthy disease free life.

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Introduction:-

The whole world is under fear of a micro-organism called corona virus. The disease called as SARS-COV2. In the beginning of 2020 the world is locked down due to the pandemic of COVID-19. Till now no specific treatment for COVID-19 is found and research is still going on. It is a very highly contagious disease and prevention of the disease is only by social distancing and isolation of the patient and doing quarantine to other suspects and contacts. As there is no specific treatment of the disease even in modern medical science and prevention by maintaining social distancing is the only way to survive for the human beings. Now advisories has been released by ministry of Ayush, Govt. of India for enhancing the body's natural defence system (immunity) to fight against the disease. It mentions that prevention is better than cure. As the battle with corona virus is seem to be very lengthy, it is worthy to empower self immunity to keep the disease away. Immunity means the strength of protecting from infectious disease. Immunity is defined as the capacity of the body to resist pathogenetic agents. It protects body from

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invading pathological microorganisms and malignant diseases. Immunity is of two types. Innate and acquired. Innate immunity is inborn capacity of the body to resist pathogens. Acquired immunity is the resistance developed in the body against specific pathogens after antigenic stimulant.

The concept of Vyadhikshamatva described in Ayurveda is equivalent to immunity. Vyadhi means the disease and Kshamatva means inherent capacity of the body either to prevent the precipitation of the disease or to check its intensity to make the body withstand when affected by the disease. Vyadhikshamatva has been explained in detail in Ayurvedic texts. Vyadhikshamatva mostly depends on Bala of body (Sharirbala). Bala may be Sahaja (constitutional), Kalaja (Temporal strength) or Yuktikrita (Acquired strength).

Acquired strength or Yuktikrita Bala represents the immunity acquired in which disease can be defended against by Ayurvedic concept or plans for acquiring enhanced immunity. Some examples are Rasayana, Vyayam and Satmya.

The concept of 'Ojus' has been also explained by the Acharyas and Ojus is considered vital in the defence mechanism of body.

Some people who are following all good habits even though they are falling ill repeatedly while some people even do not follow any healthy life style even then do not suffer from illness. For this reason and for its solution Acharyas explained Vyadhikshamatva concept. It can be acquired by Naimittika Rasayana. Rasayana improves immunity and perform many vital functions of human body. Many herbs, herbomineral formulations and dietary factors can act as Rasayana and work as immune stimulant. Herbs like Ashwagandha, Amalaki, Mandukparni, Punarnava, Guduchi has been explained under Rasayana and are proved to be good immunostimulants. Considering all these factors, aim of this article is a small effort after thorough reviewing Ayurvedic literature from ancient texts to understand role of Vyadhikshamatva as per Ayurveda concept which may be helpful in this battle for survival of human beings.

Material and Methods:-

materials and methods adopted and used are the different textbooks and ancient Samhitas of Ayurveda, internet, online media, government advisories, articles and research papers. To understand Vyadhikshamatva (immunity) some observations are as follows - As well as information about COVID-19 is mentioned here.

Covid-19 Or Sars Cov2:

The whole world is suffering from disease SARS CoV2 or Corona Virus disease. It is a pandemic now. No specific treatment available. Prevention is only better for survival.

In December 2019, in Wuhan Capital city of Hubei province and a major transportation hub of China started Corona Virus (COVS). On 20th January committed first case in India. On 12 January first death occurred in Wuhan due to COVID-19.

Corona virus is a large family of high enveloped single strand RNA virus found in human and animals. Four generations are there -alpha, beta, delta and gamma. It is named as SARS CoV2.

SARS - COV 2002 - Appeared in China

MERS - COV 2012 - Appeared in Saudi Arabia

COVSAR (Covid) - 2020 Appeared first in China.

On 7 Jan 2020, it is identified as new corona virus and WHO on 11 February given it name as corona virus disease SARS CoV2.

On 30th January WHO declared it as public health emergency on 11th March as pandemic. It spread in many countries and risk at global level as very high.

Mode of Transmission:

Animals to humans and human to human and transmission is through infected droplets. It is a respiratory virus. In air, aerosoles of 5 µm travel < 1 meter. Aerosol < 5µm travel > 1 meter. Mortality rate is 1.4%. It is similar to seasonal flue symptoms wise but the mortality rate of seasonal flue is only 0.1%.

Clinical features:

Symptoms are fever, dry cough, sore throat, running nose, headache, ache/pain. On physical examination there are signs of shortness of breath, moist rales in lungs, weakened breath sounds, dullness in percussion and increased or decrease in tactile fremitus etc. illness is critical in 4.7% and respiratory failure, shock, multiorgan failure takes place. In severe illness hypoxemia, lung involvement is there. It is 14%. The disease is mild in 81% patients.

Diagnosis:

Nasopharyngeal and oropharyngeal swab is taken for laboratory investigations. Additional specimens are blood, stool, urine are recommended.

It is fatal in age above 80 yrs. of age.

Treatment:

Isolation is the foremost part of treatment. Mild illness should be treated at home.

No specific treatment available for COVID-19 and there is no cure for an infection as treatments and vaccines are currently study. Symptomatic treatment is being given now. Therapies used for this illness include Antiviral or retroviral medications, breathing support such as mechanical ventilation, intravenous fluids,

1. Steroids to reduce lung swelling
2. Blood plasma transfusion
3. Other antimalarial drugs - hydroxychloroquine used to relieve viral replication.

High Risk Factor:

Diabetes mellitus, Hypertension, Asthma, COPD, Cancer, Aids, etc.

Infection prevention control and preparedness and readiness required for mass management.

Transmissibility is by contact - sneezing (droplets in air-1 metre), handshake, hugging, touch, liftbuttons, light switches, everything that is touched by contaminated material.

Prevention is only better for survival by maintaining social distancing and by following preventive measures as per government advisories.

Vyadhikshamatva:

For understanding Vyadhikshamatva (immunity) from the view of Ayurveda some concepts mentioned in textbooks by ancient Acharya are mentioned here.

Vyadhi:

Vyadhi means disease. Diseases are caused due to viciation of Doshas, Strotadushti occurring due to different etiological factors or causes (Hetu). Disease are caused due to change in climate, incorrect lifestyle, and faulty dietary habits which make body to get infected by pathological micro organisms and other diseases like malignancy.

Hitadravya And Ahitadravya:

Hitadravya (Sattva) are addicted to the body or congruent and Ahitadravya (Asatmya) are incongruent to the body.

Hita - Food and substances which are suitable for body by virtue of Jatisatmya and are substances which are always suitable and accustomed to humans by birth like water, milk, ghreeta, boiled rice and others are called Hita dravyas. While the others which are always unsuitable to the human body and always cause putrefaction and destroying such as poisons, fire, caustic alkalies and others are Ahitadravyas (Asatmya). Microorganisms are Ahitadravyas.

SHAKTI:

Shakti is required for the proper growth of body and also for protection against diseases. Bala, Pushti, Dardhya are synonyms equivalent to energy.

BALA is of three types -

1. Sahaja Bala (constitutional) - It is inherited and comes from parents.
2. Kalaja Bala (Temporary) - It includes age, time, day of the week, place of birth, season and their impact on the human body.

3. Yuktikrita Bala (Acquired) - It is acquired strength dependant on healthy practices related to diet habits and activities.

We can correlate Bala with immunity-

Bala (Immunity):

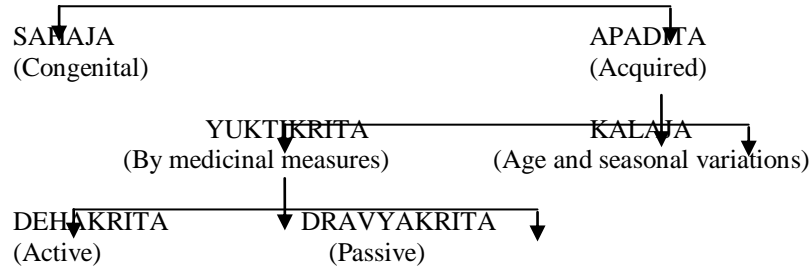


Figure 1:- Bala (or immunity) types.

II) Bala Types - a) Pravar b) Madhyam c) Avar

III) Bala according to Kala (season)-

| | | | |
|-------------|---------|---------|---------|
| | Uttam | Madhyam | Hina |
| Adankala | Shishir | Vasant | Grishma |
| Visargakala | Hemant | Sharad | Varsha |

Figure 2:- Bala according to kala (season).

IV) Bala according to Vaya (age)-

| | |
|----------------|------------|
| Vaya | Bala |
| Balyavastha | - Madhyama |
| Madhyamavastha | - Uttam |
| Vridhdhavastha | - Heena |

V) Status of Bala according to Dosha and Kala of the day (durnal variation and dominant of Doshas)

| | | | |
|-------|-----------|-----------|----------|
| Bala | Uttam | Madhyam | Hina |
| Dosha | Kapha | Pitta | Vata |
| Kala | Purvardha | Madhyanha | Aparanha |

Figure 3:- Bala according to status of Kala and Dosha.

Vyayam:

Exercise. It enhances capacity and strength of body tissues.

Kshamatva:

Chakrapani defined the Kshamatva as the inherent capacity of the body either to vert the precipitation of the disease or to check its intensity to make the body withstand or resist when affected by the disease.

Acharya Charak has explained Vyadhikshamatva for the first time in Ayurveda. Chakrapani defined Vyadhikshamatva as it denotes the resisting power of the body which reacts to arrest the progress occurrence or reoccurrence of the disease. Contributing factors of Vyadhikshamatva are Prakrit Dosha, equilibrium state of Dhatu, Prakrit Agni, potency of strotas, etc. Chakrapani described Vyadhikshamatva using following words.

1. Vyadhikshamatva
2. Vyadhibala virodhitva
3. Vyadhiutpadaka pratibandhatva

Vyadhibala virodhitva means reducing the strength of disease those already manifested and vyadhiutpadaka pratibandhakatva means prevention of those diseases to be yet manifested. Vyadhibalavardhanatvam is developing specific immunity against the Bala of the disease.

Ojus:

Ojus is the essence of Saptadhatu and is the seat for strength. It is mala of Shukra. It is also termed as Shleshma, Rasa and Rakta. Bala is also used to synonym of ojus. Types of Ojus are Para (Ashtabindu) Ojus and Aparā (Ardhanjali) Ojus. Charak explained it in the chapter of Atha Dashamahamuliya Adhyaya in Charaksamhita. In this context Chakrapani commented that quality of Para Ojus is 8 drops (Ashtabindu) and is located in hridaya. The seat of Aparā Ojus (Ardhanjali) on the other hand is dashadhamanies connected with hridaya.

Functions of Ojus:

In utapatti

1. Fertilization
2. Growth and development of foetus (garbha)
3. viability or nonviability of foetus

In Sthiti - Ojus influenced the function of physical, sensory, psychic and other higher faculties of the body and maintain the homeostatic condition of body. All the activities of living body may be kayik, vachik, manasika takes place.

Rasayana:

Rasayana is a potential branch of Ayurveda in which various herbal and herbomineral and metallic preparations are used. It deals with the concept and methodologies of drug designing as for Vyadhikshamatva, which is similar to concept of immunity.

Types of Rasayana:

1. Naimittika Rasayana - It is utilized for specific curative purpose. It speeds up the faster recovery from the disease. Examples are Dhatri Rasayana, Brahmi rasayana, Triphala Rasayana.
2. Ajastrik Rasayana - It is used to improve health. Maintaining good health, lifestyle and diet or exercise. It involves consumption of milk, honey, ghreeta and maintaining discipline of the life style.
3. Kamyā Rasayana - It is used to improve functions like desire and intellect. Examples are Shankhapushpi, Ayush kamyā for increasing longevity. Vyayasthapak Mahakashaya containing herbs like Guduchi (Tinospora cordifolia), Amalaki (Emblica officinate), Mandukparni (Centella asiatica), Punarnava (Boerhavia diffusa), Ashwagandha (Withania somnifera). Some Bhasmas are also used as Rasayana Chikitsa. They are Herbo mineral formulations of Ayurveda branch Rasashastra. Amalki Rasayana is useful in neurodegenerative disorders.

Rutuharitaki Rasayana has been mentioned for Amlapitta disease along with different Anupanas.

Swarna Prashan:

Swarna prashan is explained as to be given to newborn as immunity booster, explained in Jatakarma Sanskara of Navajata. It protects baby from infection, enhances intelligence and acts as memory booster. Acharya Kashyapa explained it in Kashyapa Samhita.

Discussion:-

This pandemic of Corona virus disease SARS COV2 has forced human being to accept that the most superior power in this universe is nature and not the human being. If human does not follow the way of nature he has to suffer in any way like this infection and many other disasters. There is no treatment for COVID-19 and no treatment and vaccination available till now. Only prevention is the way by adoption of social distancing as the contaminating rate is very high. Only good immunity can protect human from getting infected by microorganisms to some extent. So now man has to understand the importance of healthy life style, good diet habits and daily exercise importance which is very important for acquiring immunity. Immunity can be acquired with some herbs and medicines also, as per Ayurvedic literature and previous research conducted. Immunity means strength of protecting from infectious diseases. It protects the body from invading pathological microorganisms and malignant diseases. When etiological factor comes in contact with the body, tries to produce the disease. But at the same time body also tries to resist the disease. This power of body which resists the development of disease or resists a developed disease is called immunity. It is observed that certain persons do not develop a disease even after coming into contact with the relevant etiological factor while at the same time others get victimised by the same microorganism or the disease at the same time in same environment or climate. We can say that when resistance power of the body is sufficiently stronger it destroys the causes. And this resistance power can be acquired by immunity which may be inherited or

acquired. Microorganisms enter the human body through air, water, soil, etc. Innate immunity is inborn capacity of the body to resist pathology. Acquired immunity is the resistance developed in the body against any specific pathogen after an antigenic stimulant. Innate immunity is Sahaja bala and acquired immunity is Yuktikrita Bala. Microorganisms (Grahās) are said to be Ahita Dravyas. Imbalance of Tridoshas vata, pitta, kapha and consequent impact on the body components (Dushyas, Dhatus and Malas) are responsible for disease. It can be said that balanced Tridoshas, balanced Agni, excellence of all Dhatus and normal functioning of all Strotasas, along with the body strength (Bala) contributes to the immunity of the body. According to Charak Shleshma is strength of body. It is Prakrit Kapha in the body. excellence of Prakrit Shleshma in the body signifies the excellence of Ojus and indicates good body immunity. Ojus is the essence of Saptadhatu and is the seat for strength. Ojus as described above has important and significant role in the context of Vyadhikshamatva. Apara ojus prevents the decay of body. It is stated that deficiency of Ojus in the body causes wasting, decay, degeneration and destruction. Sushruta has described it in the form of disease as

1. Ojus vistransa (displacement)
2. Ojus vyapad (Viciated by dushta dosha dushya)
3. Ojus kshaya (viciated by Dushta Dosha Dushya).

In disease like Rajyakshma (Tuberculosis), Madhumeha (diabetes mellitus), Pandu (anaemia) the power of production and distribution of Ojus is affected. Ojus and immunity are interlinked. According to Charak Shleshma is the strength of Body. Excellence of Prakrit Shleshma in the body signifies the excellence of Ojus and indicates good body immunity. Bala is also used as synonym of Ojus. Ojus may be considered as secretion of endocrine glands. When Ojus is in good quality and quantity the strength of the body and its immunity for fighting against the disease is at its best.

Considering all these factors in mind we can understand that why sometimes substances do not harm the body but remain dormant due to their regular and continuous usage in smaller dosage. In the strong person with good vitality, exercise power and good digestive capacity, the said Astamya substances in small quality cannot harm the body. As the person develops Kshamatva considering Vyadhikshamatva as per Acharya Charak, it means that all the Doshas are neither to equal strength nor all the bodies capable of resisting disease equally.

We can develop Vyadhikshamatva by following the lifestyle and guidelines given in ancient Ayurvedic literature. Such as following Dincharya, Ritucharya and practicing Rasayana therapies as explained.

Immunomodulatory effect of Ashwagandha (*Withania somnifera*) has been proved. It is said to be anti inflammatory, antiarthritic, antitumour, antistress, antioxidant, hemopoietic and rejuvenating properties. It has a positive effect on the endocrine, cardiopulmonary and central nervous system. Guduchi (*Tinospora cordifolia*) has effect on the bacteria *e coli* and can be used as immunomodulator for activation of macrophages, antitumor and immunostimulatory. Amalkia (*Emblica officinate*) is antioxidant, immunomodulatory, cytoprotective activity.

Bhasmas also perform many vital function as Rasayana such as stimulant, antioxidant, improves strength, immunity, longevity memory and intelligence etc.

Thus it can be said that with the help of Rasayanas, Vyadhikshamatva can be acquired and Yuktikrita Bala can be achieved which helps to fight against diseases.

Conclusion:-

Ayurveda is the science of life. After a thorough view through ancient ayurvedic Samhitas, literature and on the basis of the research available on immunomodulatory herbs and drugs it can be said that with the help of concepts of Ayurveda and the medication and therapies given in Ayurveda as Rasayana, Satmya and Yuktikrita Bala, Ojas good immunity can be achieved and man may be ready and prepared to face any disaster related to medical health problem, in future.

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