A DREADFUL RAVAGE ACROSS THE GLOBE-"COVID 19"

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ABSTRACT
COVID-19 is a rapidly changing and evolving situation. So far in Modern Western Medicine, no cure has been found which is specific to COVID-19. Fever is well understood in Ayurveda and it occupies the first chapter in treatment in Charaka Samhitha and Ashtanga Hridayam. It deals with diagnosis, pathophysiology, classification, management, diet and prognosis. In this case, the fever was diagnosed as per his presenting symptoms as a Vata Kapha predominant one. In this Roga, the Roga Marga is Abhyantara. There is Pranavaha Sroto Dushti observed in this disease, as there is severe respiratory distress along with other symptoms, sometimes leading to death. The seat of affliction of this disease is primarily Uras (Chest Region). This Jwara can be classified as being Agantu (external) caused by Bhoota Abhishanga which aggravates all the Three Doshas. Since all the Three Doshas are aggravated it is labelled Sannipata. And Ayurvedic medicines and diet helps the patients from turning critically ill.

INTRODUCTION:
COVID-19 is proving to the world, tiny viruses are powerful biological agents, capable of rapidly effecting massive damage and fatality. SARS-Cov-2 is one of the seven types of corona virus including the ones that cause severe diseases like middle east respiratory syndrome and sudden acute respiratory syndrome. The recent strain of corona virus is named as 'novel corona virus' and abbreviated as 'COVID 19'. As clinical manifestation of the disease is pneumonia in most of the cases it was named as 'Pneumonia of unknown origin'. The name corona virus is derived from the latin word meaning "crown or wreath". This
morphology is created by the viral spike peplomers, which are proteins on the surface of the virus. The name was coined by June Almeida and David Tyrrell who first observed and studied human Coronavirus. Coronavirus comes under the family Orthocoronavirinae. The shape of their nucleocapsid is helical. Size if coronavirus ranges from 26-32 kilobases. The disease was first detected and reported in Wuhan, China and now spreading 100 countries with increasing incidence in the world. It spreads mainly through person-to-person contact. Scientists call them zoonotic because they get transfer from animals to humans. Ayurveda, the science of life, deals the organism in a holistic way. This article throws light on preventive and therapeutic measures preventing and treating viral epidemics like COVID 19.

SYMPTOMS:
The incubation period ranges from 1 to 14 days. Common signs of infection include fever, coughing and breathing difficulty. In severe cases lead to pneumonia, multiple organ failure and even death. Some people infected are asymptomatic and they do not display any symptoms despite having the virus in their systems.

Beside affecting respiratory system SARS-Cov 2 can also actively infect and replicate the gastro intestinal tract. And some patients also report symptoms such as diarrhea, vomiting and abdominal pain. Virus in the gastro intestinal tract spread by fecal-oral transmission or from an infected persons feces to another person's mouth. Fecal-oral transmission may be a secondary route for COVID 19 transmission.

Corona virus also shown to cause organ damage in some patients. Viral structures and non-structural protein bind the porphyrin respectively. De-oxyhemoglobin is more vulnerable to virus attacks than the oxidized hemoglobin. This virus attack causes less and less haemoglobin that carry oxygen and carbon-di-oxide producing symptoms of respiratory distress. Virus attacks damage many organs and tissues due to the deficit of oxygen.

Scientists also explored that COVID 19 has the potential to harm the urinary and male reproductive systems in addition to respiratory system.
WHY HEAVY DEATH TOLLS?
Corona virus contain single-stranded RNA genome. COVID 19 is the largest category for an RNA virus. Infection begins when the viral spikes glycoprotein attaches to its complementary host cell receptor. After attachment a protease of the host cell cleaves and activates the receptor attached spike protein. Cleavage and activation allows the virus to enter the host cell by endocytosis or direct fusion of the viral envelope with the host membrane and it starts to make new copies of itself that can go on to infect other cells.
RNA viruses are more prone to mutation and SARS-Cov 2 is mutated at a slow pace. The new mutation infect and sickens people differently. Among the types of corona virus COVID 19 is virulent stain and more complex than the other RNA viruses. Due to this the tiny micro-organism carries with it a mortality rate of about 10% for people over 70 years of age and 22% for those over 80.

WHY COVID-19 is challenging?
As the name suggest the virus is novel, therefore humans have no natural immunity to it. And researchers are focusing to develop vaccine to educate the immune system to defend itself from the virus. A central player in the fight against novel corona virus is our immune system. It protect us against the invader and helpful for therapy.
Cytotoxic T cells is the most potent immune weapon against COVID 19 . There is currently no vaccine for corona virus, so for now our immune system must adapt unaided to this potentially deadly treat.
The immune system is precisely a system comprised of mind and body, not a single entity. To function well, it requires balance and harmony. The immune system refers to a collection of cells, chemicals and processes that function to protect respiratory passages, intestinal tract and other tissues from foreign antigens such as microbes. The immune system does a remarkable job of defending against the disease causing micro-organisms. Viruses evolved know to trick,bypass and evade these defences. Our immune response should learn to recognize and detect these virus stealth tactics. So boosting our immune system is prime most important in this present situation.
COVID 19- AN AYURVEDIC OVERVIEW: UNDERSTANDING OF COVID 19 IN AYURVEDA:
The COVID 19 the newly emerging pandemic can be understood in Ayurvedic view under the concepts of
• Aupasargika vyadhis
• Janapadodhwamsa vyadhi
• Anukta Vyadhi
AUPASARGIKA ROGA:¹
Acharya Sushruta depicts different modes of communicable disease transmission in Kusta Nidana Adhyyaya Nidana Sthana. The mode of transmission of Aupasargika rogas explained are Gatrasansparshat, Prasangat, Nishvasat, Sahabhojanat, Sahashayya, Asana,Vastramalaya Anulepanat. These concepts are relevant to the present deadly virus. And hence we can also observe that WHO suggest personal hygiene, frequent hand wash,self-isolation and social distancing as preventive measures to avoid infection as it is a deadly communicable disease.
JANAPADODHWAMSA VYADHI:²
Ayurveda describes a concept called Janapadodhwamsa that can be compared with epidemic. 'Janapada' refers to community and 'udhwamsa' refers to destruction. In Caraka Samhitha has devoted a separate chapter in Vimana Sthana named 'Janapadodhwmsa'. The key factor of epidemics explained in Sushrutha Samhitha are
• Inappropriate season
• Inproper deeds related to body, mind and words
• Curse of Animals
• Disrespectful for nature
• Compromise on diet, regimen, personal and social ethics.
• Break down of living culture
The symptoms explained include Kasa, Swasa, Vamathu, Prathishaya, Shiro roga, Jwara etc which mimics with the symptoms of the novel corona virus. The treatment protocol for epidemics explained in Sushrutha Samhitha are Sthana Parithyaga,Shanthikarma,Namaskara,M angala,Homa,Prayachitha,Dhana,Niya ma etc which is also suggested in this present scenario. Human body is an outcome of Pancha Mahabhootas. The environment is also made of the same. So maintaining harmony with the environment is a key for wellness. As the people in the world fail to maintain harmony with the environment such an dreadful pandemic had occured.
ANUKTA VYADHI:
Anukta is unsaid/unuttered/unheard or extraordinary things. Anukta Vyadhi’s are those which are not explained in the Samhitha. As the time has passed on, the food habits, life style of humans has been changed. This drastic change in environment and climate produce newly formed diseases which are not explained in Ayurveda Samhitha. Trividha Hetus of Vyadhi are described in classics as Heena,Mithya and Atiyoga of Kala-Artha-Karma respectively. Due to the drastic change in life style produce a huge change in form of Prajnaparadha and Parinama. While diagnosing the Anukta Vyadhi ,Vikara Prakruti should be identified. Not only Dosha Prakruti are responsible for the production of the disease but other Vyadhi Ghatakas are also important. Dosha Dushti may be Ekadoshaja, Dwidoshaja, Tridoshaja. Identification of the Prakruti of the patient is also important in regards to Dosha Prakruti and Manas Prakruthi. The newly formed Anukta Vyadhi exist due to drastic change in life style, changes in environment, new pathogens which shares the present scenario.

SWASTHASYA SWASTHA RAKSHANAM IN COVID 19:

Avoidance of causative and precipitating factors of disease is utmost important in this pandemic. Preventive approach of Ayurveda include Dinacharya,Ritucharya and Sadvritta. As the name suggests "Nidana" stands for " the contributing factors" and Parivarjana stands for "give up". Enhancing immunity of one-self ie) Swabhaavoparna also paves Nidana Parivarjana which enhance the strength of human body to fight against pathogens.

The measures which can be done in the current situation are

- Intake of Amalaki,Guduchi,Nimba,Kutki and Tulsi are Ayurvedic herbs helps in building immunity and preventing infection.
- 2-3 drops of sesame oil in each nostril and snuffing it lubricate the nasal passage and throat whichstrengthen the inner mucus membrane to keep away foreign bodies.
- Spadika mixed with water can be used as sanitizer, hand wash and also for Gandusham.
- Dhoomapana can be done with herbs like Maricham, Haridra and Nimba Patra.
- Chyawanaprash, Shadangapanyam are also administered which enhances
immunity and help prevent the spread of virus.
When an Aganthu (Microbes) enter into the body Sanchaya should not take place in the disease process for that immunity should be enhanced, by following the above measures.

**OVERVIEW OF TREATMENT STRATEGY:**
Ayurvedic experts even before thousands of years have known the fact that the pathogenesis is highly dangerous, being the mechanism by which the illness is actually caused. Infection due to microbes fall under pathogenetical illness. By disrupting pathogenesis, Ayurvedic treatment stops harmful microbes to spread and destroy the entire body.

Three types of treatment procedures implemented in COVID-19 as per Ayurveda are
- Daivavyapashraya
- Yuktivyapashraya
- Sattvavajaya

Out of these three measures Sattvavajaya and Daivavyapashraya includes Adravya bhuta measures

**DAIVAVYAPRASHAYA CHIKITSA:**
Daivavyapashraya Chikitsa involves measures to combat Daivakrit diseases. The term "Daiva" refers to belonging to Divine, Celestial, To action of the past life." Vyaprasraya" refers to depending on taking refuge with.

It is a modality of treatment based on past deeds and pleasing God. As the present pandemic COVID-19 is beleived to be the effect of Janapadowamsa, Parajnaparadha where Daiva Vyaprasraya Chikitsa plays a significant role. They include Pooja-bhajana, Dhana, Mani-mangala dharana, Upavasa-vrata and many more.

**SATTVAVAJJAYA CHIKITSA:**
The COVID-19 patients are already stressed out due to the disease and in addition they are depressed due to isolation and away from families. Now at present people deal with two problems
- Heightened risk of serious illness and death.
- Mental health effects from fear

The corona virus has made this difficult because visitors, notably family members can't take care of the patients which worsen feeling of loneliness and depression. Many are afraid of the solitary lonely death and this mental fear takes high toll of death than the disease actually do. So
the Sattvavajaya chikitsa normalizing manodosha ie) subsiding effect of Rajo and Tamo guna implement satwaguna to mind.
The word Sattvavajaya comprises of 'Satva' and 'Avajaya'. 'Satva' refers to self-command, strength of mind and character. 'Avajaya' means overcoming, victory and conquer.
AIMS OF SATTVAVAJAYA CHIKITSA:
- Divert mind and make person to involve in other activity.
- Help individuals discriminate between objective and imagined dangers.
- To initiate bhakti or strengthen belief in Ishta-Daivam.
- To expel out phobia.
- Replacement of emotions
- Assurance

METHODOLOGY OF SATTVAVAJAYA CHIKITSA:
- Cintya - Regulating thought process
- Vicharya - Replacing ideas
- Uhya - Channeling presumptions
- Dheya - Polishing objective
- Samkalpa - Proper guidance and advice

The features and principles of Sattvavajaya chikitsa can be co-related to the modern psychotherapeutic concept of cognitive behavioural therapy.

Sattvavajaya as psychotherapy is the mental restraint or a mind control therapy as referred by Charaka is achieved through spiritual knowledge, fortitude, rememberance and concentration. According to Ayurveda 'Prajnaparadha' is the main etiological factor in mental illness and can be treated by bringing the Dhi,Dhrti, Smrti of the patient in proper condition.

YUKTIVYAPRASHYA CHIKITSA:

The term Yukti refers to union, connection, reasoning and application. Charaka defines Yukti Vyaprashaya Chikitsa is the judicious use of Ahara and Aushadha according to proper use, plan or yojana. Yukti Vyaprashaya is based on Yukti or rational thinking and represent careful and purposeful employment of a drug or method of treatment.

COVID 19 is due to Three Dosha with Kapha Pradhana and hence Laghu,Ruksha Oushadha Aahara should be prescribed. It is useful to understand the Samprapti, Satva, Satmya, Bala, Agni, Sadhya Asadhyatva.It affects mainly the Pranavaha Srotas and hence
Shvasaroga Chikitsa should be adopted.
- To reduce aggravated and accumulated Vata and Kapha Doshas
- To purify Rasavaha Srotas
- To purify and unblock Pranavaha Srotas.
- To optimize Agni

As the present COVID-19 affects other systems also other than respiratory system, specific symptomatic treatment along with Panchakarma treatment is suggested.

SAMPRAPTI GHATAKAS:
DOSHA: Predominantly Kapha (Both Vatha and Pitta secondarily affect to varying degrees)
DUSHYA: Rasa Dhathu
AGNI: Mandagni
AMA: Sama Roga affecting digestion and cellular metabolism
SROTAS: Pranavaha Srotas
Rasavaha Srotas
SROTODUSHTI : Sanga, Atipravriti
STHANA: Udbhava Sthana(Upper region)
VYAKTA STHANA: Manifests in upper body primarily in Kapha regions (Lungs, Sinus, Stomach, Heart,Blood and joints)

INTERNAL MEDICINES:
- Vasa Ghrita
- Dasamoola Rasna Ghrita
- Yastimadhu Pippaladi Ghrita
- Indukantha kashayam
- Sudarshana Vati,Dhanwantara Gulika,Talisadi Choornam
- Vasa, Kantakari,Tulsi, Guduchi, Kalamegha,Amalaki, Ashwagandha, Pippali, Haridra, Yastimadhu with honey as Anupana act as Kaphahara, Marganusari and Yogavahi.

These herbs combined or single can be given to each individual based on the symptoms.

PANCHAKARMA TREATMENTS:
Panchakarma is the best treatment for vitiation of factors and effective in terms of prevention and treatment.

SWEDANA:
Swedana confine to its application with respect to COVID-19 early treatment and prevention. Both localized and generalized Swedana may be indicated. Wet heat procedures include Dhara, Pinda Sweda, Bashpa Sweda, Pizicchil can be done. Oil used for this procedure in COVID-19 include Marichadi Taila, Sarshapa Taila, Ajamodadhya Taila and Haritaki Danti Taila. Dry heat procedures include Ashmahna, Bhu, Karsha ,Kupa are advised. Modern version of dry heat
which is very effective is full-spectrum infra red system. Based on the constitution of patient, bodily organs affected, season, age, physician should choose the proper form of Swedana.

**DHOOMAPANA:**
Dry cough accompanied by difficult breathing indicate Srotodushti Sanga. In this case Dhoomapana (nasal inhalation of herbalized smoke) can be administered. Herbs like Devadaru, Kantakari, Eranda, Neem, Laksha, Guggulu releive blockages and congestion in the lower respiratory tract.

**VAMANA:**
Vamana Karma is the supreme method of eradicating aggravated Kapha Dosha from physiologies of healthy individual to maintain health. As Kapha Dosha accumulates in excess this will predispose to diseases at the site of the accumulation the stomach and the respiratory tract. It is wise to radically eliminate Kapha Dosha from the site of origin to stop the disease process.

**CONCLUSION:**
Ayurvedic holistic approach to health focus on prevention, as it is the key to manage this outbreak. Ayurveda emphasizes avoidance of causative factors and enhance immunity through Panchakarma, diet, sleep, lifestyle and managing anxiety.

Typhoid, Cholera, Plague, Small pox and at present COVID-19 despite changing names of pandemic diseases in every generation Ayurveda remains recognized and never changes. Following Panchakarma, avoiding Prajnaparadha, following proper Ritucharya will help to maintain health in the society. Rasayana therapy done with medicines restores physical health and act as rejuvenation after curing from disease. Use of Vata kaphakara, Ushna, Vata Anulomana, Panchakarma, Rasayana and Nidana Parivarjana paves way to Swastha Bharatha in this current pandemic.

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