



AN AYURVEDIC APPROACH IN COVID - 19 PANDEMIC

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ABSTRACT

In present time maximum countries and territories (213) of the world are facing an disastrous pandemic of novel corona virus disease COVID - 19 caused by severe acute respiratory syndrome corona virus 2 (SARS CoV -2) In whole world total cases 27,069,984, total deaths 883,780, active cases 7,015,318, critical cases 60,108, and total recovered cases 19,170,886 as of 6 September 2020. This horrific condition reveals that COVID - 19 pandemic has reached a dreadful stage in nine and half months despite of worldwide efforts. The pandemic is continuing to spread for want of clinically proven prophylaxis and treatment policy. Based on ayurvedic texts, contemporary scientific studies and experimental knowledge by clinical settings, we have tried to formulate an ayurvedic strategy for intervention in our nation. The plan is based on the stage of infection in people. The true fact is no system of medicine has any evidence based treatment for COVID - 19 till now. So an ayurvedic approach for intervention should be admired.

KEYWORDS: COVID - 19, SARS - CoV2, Ayurvedic Intervention, Pandemic.

History of COVID - 19 Pandemic

COVID - 19 is an infectious disease caused by a newly discovered corona virus. Coronaviruses are group of related RNA viruses that cause diseases in mammals and birds and belong to corona viridae family. They cause respiratory tract infections which appear as mild to severe diseases e.g.

Middle East Respiratory Syndrome (MERS CoV) in June 2012

Severe Acute Respiratory Syndrome (SARS CoV) in November 2002

COVID - 19 or SARS CoV 2 caused by novel corona virus in November 2019

MERS CoV was transmitted from dromedary camels to humans in Saudi Arabia. SARS CoV was transmitted from palm civet cats in China. SARS CoV2 was transmitted by bats and possibly the pangolins but it is spreading from person to person without any animal intermediary. The first case of COVID - 19 was detected on 17 November 2019 in a 57 year old female who was a shrimp seller in Wuhan city of Hubei province in China. Up to 15 December total cases reached to 27 and 60 cases up to 20 December. On 31 December 2019 WHO was formally notified about a cluster of cases of pneumonia in Wuhan city of Hubei. Ten days later WHO was aware of 282 cases.

Structure of corona novel virus

Corona viruses are large, enveloped, positive stranded RNA viruses. They have the largest genome among all RNA viruses, ranging from 27 to 32 kb. The genome is packed inside a helical nucleocapsid protein and further surrounded by an envelope. Associated with viral envelope are at least three structural proteins. The membrane protein (M) and envelope protein (E) are involved in virus assembly, whereas the spike protein(S) mediates virus entry into host cell. The spike forms large protrusions from the virus surface giving appearance of crown. The spike is also a determinant of viral host range and tissue tropism and major inducer of host immune responses.

Spreading of corona virus infection

- It spreads from person to person among those in close contact.
- Virus spreads by respiratory droplets released when someone coughs, sneezes and talks. These get inhaled or land in mouth or nose of healthy person.
- It also spreads if a person touches a surface with the virus on it and then touches his or her mouth, nose and eyes

Sign and Symptoms of COVID - 19**In Common**

Fever, cough, shortness of breath and tiredness

Less Common

Aches and pains, sore throat, diarrhea, conjunctivitis, headache, loss of taste or smell, and discoloration of fingers and toes.

Serious

Difficulty in breathing, chest pain, loss of speech, loss of movement and death

Complications

Pneumonia, severe acute respiratory syndrome (SARS), kidney failure, heart problems, blood clotting and additional viral and bacterial infections

High risk factors

Medical conditions that increase the risk of serious illness from COVID - 19 include –

1. Heart diseases such as heart failure, coronary artery diseases and cardiomyopathy etc. – 2.
2. COPD and other lung diseases.
3. Type 1 and type 2 diabetes.
4. Kidney diseases
5. Liver diseases.
6. Brain and nervous system diseases.
7. Hypertension.
8. Weakened immune system.
9. Endocrinal disorders.

Prophylactic recommendations

Indian central as well as state governments have issued an advisory time to time for prevention of COVID - 19 pandemic spread and establishment of strategy for minimizing risks and maximizing results. Out of which few preventive measures have been mentioned here ---

- Regular hand washing with soap and water for 20 seconds or use of a minimum 60% alcohol based sanitizer.
- Covering mouth and nose with mask.
- Avoidance of close contact (within 6 feet) with everyone specially with anyone having symptoms of respiratory illness e.g coughing sneezing and fever. It is called social distancing.
- Staying at home as much as possible and going outside only for essential work.
- Covering the mouth and nose with one's elbow or a tissue paper at the time of coughing and sneezing.
- Cleaning and disinfecting high touch surfaces such as door knobs, light switches, electronic gadgets and counters.
- Avoiding large events and mass gatherings

Prognosis of COVID - 19

80% cases present with mild symptoms requiring primary medical care at L1 centers. 15% cases present with severe symptoms require urgent medical care at secondary medical centers L2 type 5% critical cases

require intensive care in tertiary health care centers equipped with ICU L3 type. Current fatality rate till is 1.74% which is lower than global average. Less than 0.33% cases on ventilator support. 2.03% cases in ICU. Less than 3.49% cases on oxygen support. Recovery rate is 77.15% (dated 4 September 2020). Reduced peripheral capillary oxygen saturation (SpO₂) below 90% is also a risk factor in mild cases.

Ayurvedic interventions

No system of medicine has any evidence based treatment for COVID - 19 as yet; clinical interventions are being done globally. In India ayurvedic interventions have become more relevant and realistic. A well known ayurvedic classic Charak Samhita is having an elaborated description of causes and management of epidemic (janpadodhwansa) In present time it is required to mainstream the AYUSH systems to transform in Indian health care. COVID - 19 epidemiology and pathogenesis as learned through ongoing pandemic is helpful in planning an ayurvedic intervention for its prophylaxis and symptomatic relief to its patients. The strategy of ayurvedic approach admires the guidelines of ministry of AYUSH and govt. of India. It contributes to prophylaxis of COVID - 19 by immunity boosting and therapeutic domain also.

Selection criteria of Ayurvedic drugs

- Safety and potential efficacy
- Availability
- Broad spectrum applicability
- Ease of administration
- Affordability
- Long term clinical use mentioned in texts.

Categories of population

Strategy is made on the basis of four categories present in the population.

(1) Unexposed Asymptomatic

Individuals: - Who do not have any related symptoms

- Have no risk factors and co morbidities
- Healthy people which are most suitable for boosting immunity

Non pharmacological approach: - Healthy nutritious food (aahara) -Adequate physical activity (vihaara)

- Proper sleep (nidraa)
- Retainable and non retainable urges should be managed (vega)
- Following right conducts or social ethics (sadavritta)

Sanitization of homes and shelters with fumes of garlic turmeric powder ajwain seeds and lobaan (dhupan)

- Social distancing (distance of minimum 6 feet)
- Washing hands frequently as well as whole body regularly

Pharmacological approach: - Community based swarn prashan.

- Intake of rasayanas which are having effect on respiratory tract e.g Chyawanprash and Amrita bhallataka. Rasayanas act as antioxidants, anti inflammatory, anti microbial, anti stress and immunity booster.
- Intake of milk with turmeric powder
- Decoction of mulethhi, guduchi, balaa and ashwagandha a. These are jivniya and balya drugs so act as immunity boosters.

(2) Exposed Asymptomatic

Individuals: - Who are without apparent symptoms but at risk due to contact history or corona report positive.

Non pharmacological approach: - Need to be quarantined carefully - Sanitization of home and shelters properly Maintenance of personal hygiene

Pharmacological approach: - Chitrakaadi vati, sanjeevani vati, sanshamni vati and shwashaari vati are used to maintain the level of agni and for aamapaachana in order to prevent progression of disease in its initial stage. Sanjeevani vati is used in communicable diseases, fever, cold, cough and indigestion since long time. - Decoction of combination of guduchi, pipali, tulsi, mulethhi, vaasaa, chireitaa, trikatu and triphallaa is recommended because they are known to broad spectrum anti viral and protease inhibitors.

(3) With Mild Symptoms

Individuals: - People who are found corona positive and having mild URTI symptoms with no high risk factors.

Non pharmacological approach: - Patients are carefully isolated and monitored for any progressive symptoms.

Adequate therapy is given for symptomatic relief and Balancing the vitiated doshas which also arrests the progression of disease.

Pharmacological approach

Most suitable medicines are sitopalaadi churna, taalishaadi churna, sanjeevani vati, pippali rasayana, lakshmi vilaas rasa, vyaghri haritiki, kantkaari avleh, dashmula quwath.

Patients showing progression of disease may be shifted to ICU.

Hot water for drinking which enhances the agni and pacifies aama.

(4) With moderate to severe symptoms:

Individuals: - patients having moderate to severe symptoms patients also belong to high risk groups

Pharmacological approach

- Patients require tertiary care from beginning

- Ayurvedic medicines can be co - prescribed which can reduce the impact of the pathology eg:

Sanjeevni vati, Tribhuvana keerti rasa, L aghu vasant, maalti rasa, Mrityunjaya rasa, Brihat vata chintamani rasa, Siddha makardhwaja rasa

Rasa aushadhis fulfil the urgency of therapeutic actions. Their better absorption and bio availability in body is achieved when given sublingually and orally.

DISCUSSION

The ayurved physicians should do proper documentation on each case. The variations are found in different individuals based on age, gender, geography, contact history, prakrati, saara, satva, saatmya, ahara shakti, vyayama shakti (rogi pariksha). Examination of disease (rog pariksha) is done by observing improvement or worsening of symptoms. Ayurvedic medicines with dosage, outcome of management, referral to higher centers, symptoms which are cured and others which are not controlled and mortality if any are to be documented systematically.

CONCLUSION

Study of history, spread, sign symptoms, high risk factors, complications and prognosis of COVID - 19 provides an important opportunity to AYUSH department in implementation of ayurvedic interventional plan for prevention and cure of COVID - 19 symptoms. According to present requirement ayurveda should follow its own strategy for diagnosis and subsequent medication on basis of roga and rogi bala which will be complemented by world community.

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