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PREVENTION AND MANAGEMENT OF COVID 19 IN UNANI MEDICINE

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ABSTRACT

Corona virus disease (COVID-19) is an infectious disease caused by a newly discovered corona virus. This disease was unknown before the outbreak began in Wuhan, China in December 2019 Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. The number of cases of COVID-19 infection in India is increasing day by day. With the spread in many states, general measures like isolation, social distancing, and regular use of masks and frequent washing of hands are being propagated. The best way to prevent and slow down transmission is be well informed about the COVID-19 virus, the disease it causes and how it spreads. Protect yourself and others from infection by washing your hands or using an alcohol based rub frequently and not touching your face. In Unani system of Medicine there is no any concept of COVID 19 available but the description of Nazla Wabaiya, Humma Wabaiya are present. The signs and symptoms of Nazla Wabaiya and Humma Wabaiya are similar to the signs and symptoms of COVID 19. In Unani system of Medicine there is a detailed description of drugs which shown antiviral and immunomodulatory properties in scientific studies.

KEYWORDS: COVID 19, Nazla wabaiya, Humma wabaiya, immunomodulatory.

INTRODUCTION

Corona virus disease (COVID-19) is an infectious disease caused by a newly discovered corona virus. This disease was unknown before the outbreak began in Wuhan, China in December 2019 Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness.

Since Dec 8, 2019, several cases of pneumonia of unknown aetiology have been reported in Wuhan, Hubei province, China. Most patients worked at or lived around the local Huanan seafood wholesale market, where live animals were also on sale. In the early stages of this pneumonia, severe acute respiratory infection symptoms occurred, with some patients rapidly developing acute respiratory distress syndrome (ARDS), acute respiratory failure, and other serious complications. On Jan 7, a novel coronavirus was identified by the Chinese Center for Disease Control and Prevention (CDC) from the throat swab sample of a patient, and was subsequently named 2019-nCoV by WHO.[1]

The causative agent of Covid-19 was tentatively named as 2019 n-CoV (2019 novel coronavirus) by WHO on 12th January 2020. On 11th February 2020, it was officially named as SARSCoV-2 (severe acute respiratory syndrome coronavirus 2) by the International Committee on Taxonomy of Viruses. In India, the first case of Covid-19 was a student who returned from Wuhan, China on 30th January 2020.[2]

The number of cases of COVID-19 infection in India is increasing day by day. With the spread in many states, general measures like isolation, social distancing, and regular use of masks and frequent washing of hands are being propagated.

The best way to prevent and slow down transmission is be well informed about the COVID-19 virus, the disease it causes and how it spreads. Protect yourself and others from infection by washing your hands or using an alcohol based rub frequently and not touching your face.

The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it’s important that you also practice respiratory etiquette (for example, by coughing into a flexed elbow).[3]

Till date there is no any treatment as well as vaccine available for COVID 19, hence the emphasis is being laid on preventive measures and symptomatic treatment. So in this relation Traditional System of Medicine (TCM) are being explored for providing preventive, supportive and rehabilitative care to the patients. Presently there is no direct evidence is available, some uncontrolled studies on traditional medicines suggest that they may have a direct efficacy on the virus. Unani system of Medicine is one of the officially recognised system of Medicine in India under the Acronym of AYUSH (Ayurveda, Yoga, Unani, Siddha and Homoepathy). In Unani system of Medicine there is no any concept of COVID 19 available but the description of Nazla Wabaiya, Humma Wabaiya are present. The signs and symptoms of Nazla Wabaiya and Humma Wabaiya are similar to the signs and symptoms of COVID 19. In Unani system of Medicine there is a detailed description of drugs which shown antiviral and immunomodulatory properties in scientific studies.[4,5,6]

CORONA VIRUS DISEASES 2019 (COVID 19)

Causative organism

SARS-CoV-2 is a coronavirus belonging to the genus β-coronaviruses, sub-genus botulinum It is the seventh in the family of coronaviruses which is known to infect humans. Coronaviruses are a group of enveloped viruses with a spherical shape, having a non-segmented, single-stranded RNA genome with club-like projecting spikes on their surface SARS-CoV-2 was first isolated from bronchoalveolar lavage samples from three patients suffering from pneumonia of unidentified cause Structurally, the genome of SARS-CoV-2 is similar to other β-coronaviruses. It has a long coding strand on which five ORFs are identified: including ORF1ab polyprotein, spike (S) glycoprotein, envelope protein, membrane protein, and nucleocapsid protein.

Modes of transmission

In the initial stage of the epidemic of COVID 19, as 55% of the patients were related to a seafood and wet animal market, a likely zoonotic origin was suggested. Researchers showed that SARSCoV-2 has close structural resemblance with bat coronaviruses, supporting the theory that SARS-CoV-2 was derived from bats. Snakes have also been suggested as a likely wildlife repository of the virus. However, there was an exponential rise in unrelated cases since late December 2019 But statistics showed that the disease is spreading rapidly by human-to human transmission SARS-CoV-2 has been detected in broncho-alveolar secretions, sputum, saliva, throat and nasopharyngeal secretions of infected persons. About

50–80% transmission of the virus is from asymptomatic carriers, hence transmission through speech droplets is considered as a significant mode of transmission of the disease. The virus can be transmitted directly through speech droplets, or through fomites. Based on reports, it is estimated that 44% of the transmission can occur before the onset of symptoms An oro-fecal route of transmission is also considered. There is also evidence that the virus can be transmitted through tears and body fluids if they come into contact with the mucosa of eyes, mouth or nose. Recently evidences show that Air borne transmission also occurs in COVID 19.

Incubation Period

The incubation period of Covid-19 ranges from 1 to 14 days, average 5–6 days in most patients. Though an incubation period of up to 24 days has been reported in some cases.

Clinical Features

The disease usually affects males and females equally, although a slight male predominance has been seen. The initial symptoms are fever with/without chills, dry cough, and malaise in 83–98% of cases. Sputum production is seen in about one-third. Other symptoms include shortness of breath, abdominal pain, diarrhea, headache and vomiting, a rash on skin, discoloration of finger and toes in a few cases. Recently loss of taste or smell also seen. If pulmonary inflammation worsens, hypoxemia occurs which may lead to cardiac arrest. Elderly patients and those with underlying diseases such as chronic obstructive pulmonary disease (Chronic Bronchitis, Pulmorany Emphysema), cardiovascular disease, hypertension, etc. have a more chance of developing acute respiratory distress syndrome, organ failure or other conditions leading to death.[2,3]

Complication and Prognosis

Most patients have a good prognosis, with mild flu-like symptoms. However, a small percentage, particularly the elderly and those with underlying diseases may develop complications such as arrhythmia, shock, nephritis, acute renal failure, acute cardiac injury, acute respiratory distress syndrome, etc. Overall, the case fatality rate is estimated to be 2–3% while it is as high as 8–15% in older adults.[2,7]

Laboratory Investigations

There are two broad categories of test: a viral test for a current infection, or an antibody test for the past presence of the virus. COVID-19 testing can identify the SARS-CoV-2 virus and

includes methods that detect the presence of the virus itself (RT-PCR, isothermal nucleic acid amplification, antigen) and those that detect antibodies produced in response to infection. Detection of antibodies (serological tests) can be used both for diagnosis and for population surveillance.[8]

Laboratory findings in COVID 19 patients include a decreased white cell count in 70% patients, prolonged prothrombin time in 58% patients, and elevated lactate dehydrogenase in about 40% of the patients. Interleukin-6 (IL-6), Interleukin-10 (IL-10), Tumor necrosis factor-α (TNF-α) are increased. Bilateral patchy infiltrates are seen on chest radiograph and ground-glass opacities are seen on chest CT scan. Histopathological examination of biopsy tissues has demonstrated the desquamation of pneumocytes, formation of hyaline membrane and bilateral diffuse alveolar damage in lung, liver and cardiac tissue.[2]

UNANI CONCEPT OF EPIDEMICS (WABA)

A comprehensive literature search indicated that the term ‘waba’ is used in Unani literature to describe epidemics and pandemics collectively for diseases which spread in a large geographical area. Epidemics supposed to occur when Ajsam-i-khabisa (contagion), find a place in air and water.

Zakariya Razi (850-923 AD) stated in Kitab al-Mansoori that most epidemics occur during the autumn season, mostly when previous summer season was humid, and the wind is still (Razi, 1991). Razi in the 15th volume of his treatise Kitab al-Hawi (The Comprehensive Book of Medicine), also stated that change of temperature makes people more susceptible to respiratory infections and stressed this fact and stated that ‘there will always be something common in patients of epidemics, whether a place, food, drink or travel history’. Furthering the view, Ibn Sina (980–1037 AD) stated that epidemics spread from one person to another, and one city to another. Arabian scholar Ibn Khatib (1313–1374 AD) states, ‘the disease spreads through clothes, utensils and jewellery’. In the same vein, this statement stresses on social distancing and isolation, two important aspects of prevention in the current pandemic. The 13th-century Persian scholar Najeebuddin Samarqandi (d. 1222 AD) mentioned about a type of Nazla-e-Wabaiya in his treatise Al-asbab wa-Alamat (the book of causes and symptoms). In the translated version of the book, published by the name of Sharah Asbab, the disease is mentioned by the name of Nazla-e-Wabaiya and Humma Wabaiyya characterized by fever, sneezing, sore throat, nasal irritation and malaise and may also suffer from cough, diarrhea, and delirium. Pleurisy and pneumonia, if present, worsens the prognosis. The

symptoms of Nazla Wabaiya and Humma Wabaiyya mimic with the symptoms of COVID 19.[5,9,10]

PREVENTION OF COVID 19

To prevent infection and to slow transmission of COVID-19, do the following:

- Wash your hands regularly with soap and water, or clean them with alcohol-based hand rub.
- Maintain at least 1 metre distance between you and people coughing or sneezing.
- Avoid touching your face.
- Cover your mouth and nose when coughing or sneezing.
- Stay home if you feel unwell.
- Refrain from smoking and other activities that weaken the lungs.
- Practice physical distancing by avoiding unnecessary travel and staying away from large groups of people. (WHO)
- In Unani Medicine, by following the six essential factors of Life (*Asbab-e- Sitta Zarooriya*) COVID 19 and other diseases may be prevented.[11]

In Unani Medicine, prevention has been preferred to treatment. Its classical literature mentions that Quwwat-i-Mudabbira-i-Badan / Tabi'at (Medicatrix naturae) is the supreme power, which controls all the physiological functions of the body and provides immunity against diseases. The disease conditions are considered to occur due to weakened medicatrix naturae and may be cured by its strengthening (including immunomodulation).[5]

- Stress relieving measures are equally important to follow. Certain Unani drugs like Sa'd Koofi (Cyperus rotundus), Ood Saleeb (Paeonia emodi) and Jadwar (Delphinium denudatum) may be beneficial.
- Fumigation (Bakhoor) of the house at frequent intervals with combination of Sandal (Santalum album) and Kafoor (Cinnamomum camphora).[4]

In Unani Medicine for the prevention purpose following single and compound drugs may be advised.

Single Drugs[4,12,13]

- Asgandh (Withania somnifera) Dose 5 gm
- Gilo (Tinospora cordifolia) Dose 3-5 gm
- Amla (Emblica officinalis) Dose 3-5 gm

- Zanjabeel (Zingiber officinalis) Dose 3-5 gm
- Haldi (Curcuma longa) Dose 3-5 gm
- Punarnawa (Boerhavia diffusa) Dose 3-5 gm
- Karanjwa (Cesalpinia bonducella) Dose 1-2 gm

Compound drugs

- Hab Asgandh 2 bd
- Khamira Gauzaban Sada 5gm bd (Not Recommended for Diabetics)
- Khamira Marwareed 5 gm od (Not Recommended for Diabetics)
- Tiryaq Arba 5gm od
- Jawarish Shahi 5 gm bd (Not Recommended for Diabetics)
- Kushta Jast 50-125 mg od.[14]
- Jawarish Jalinoos 5gm bd (Not Recommended for Diabetics)

MANAGEMENT

As on date, there are no specific vaccines or treatments available against COVID-19, although there are several claims that might be effective in prevention or treatment. There are many ongoing clinical trials evaluating potential treatments. Evidence is needed on pre-exposure prevention, post-exposure prevention, and patient management. Extensive comprehensive measures have been put in place, both at hospital and community level to contain the disease.

In Unani system of Medicine various single and compound drug may be given as supportive symptomatic relief in mild to moderate cases of COVID 19.

1. Bahidana 3gm, Unnab 5 no Sapistan 9 no Mulethi 3 gm, Khatmi 3gm, Gilo 3 gm, Tukhm Katan 3 gm Preparation of Decoction by boiling these medicines in 250 ml of water, until it remains half and filter it and use lukewarm water decoction once daily in the morning and Khamira Gauzaban Sada 5 gm two times a day.

2. Qurs Tabasheer two times a day, Sharbat Toot Siyah 20 ml bd and Khamira Marwareed 5 gm once a day.[14,15]

3. Laooq Katan 5 gm bd, Hab Hindi Zeeqi 1 bd, Hab Mubarak 2 bd.[14]

4. Badaward 5gm, Sankha holi 3 gm, Chirayta 5 gm, Gule-e-Nilofar 5gm, Post Turanj 5gm, Maghz Karanjwa 3 gm, Aslus Soos 5gm, Gul-e-Banafsha 3gm. Preparation of decoction by boiling these medicines in 300 ml of water, until it remains half and filter it and use

lukewarm water decoction once daily in the morning and Jawarish Jalinoos 5 gm twice a day.[10,14]

SPECIAL CARE FOR ELDERLY[4]

Unani Medicine categorizes the elderly people under Abdan-i Zaifa (weaker bodies). Such population may have higher susceptibility for acquiring different illnesses. General guidelines are provided for maintaining their health.

- The diet should be in accordance with Mizaj (Temperament)
- Nutritive and easily digestible diet should be taken
- Frequent meals in small quantity
- Avoid drinking cold water
- Maintain good bowel habits
- Maintain adequate sleep
- Perform moderate exercises

ONGOING RESEARCH STUDIES ON COVID 19 BY MINISTRY OF AYUSH, GOVT OF INDIA[16]

1. Clinical research studies on Ayurveda interventions as prophylaxis and as an add on to standard care to COVID 19: Collaborative clinical studies as a joint initiative of Ministry of AYUSH, Ministry of Health and Family Welfare (MoHFW) and the Ministry of Science & Technology through Council of Scientific & Industrial Research (CSIR) with technical support of ICMR.
2. Ayush Sanjivani application based study for impact assessment of acceptance and usage of AYUSH advisories in its role in prevention of COVID 19.
3. Drug Trial to Evaluate Efficacy and Safety of an Ayurvedic Formulation AYUSH-64 as Adjunct Treatment to Standard in COVID 19.
4. Evaluation of Efficacy and Safety of Ayurveda Intervention (Ayush-64) add-on therapy for patients with COVID-19 infection (Stage I)-A Randomized controlled clinical trial.
5. Evaluation of the efficacy of an Ayurvedic intervention (Chyawanprash) in the prevention of COVID-19 among Health Care Personnel.
6. Interventional study on the effect of AYUSH as a prophylactic measure among high risk population (Health Care Workers/Containment Zone population) exposed to COVID 19.

CONCLUSION

Till date there are no specific vaccines or treatment available against COVID 19 although there are several clinical trials are being done on vaccines as well as treatment of COVID 19. In Unani system of Medicine for the purpose of Prevention, Prophylactic clinical trials may be conducted for boosting the immunity. Similarly for the treatment purpose Clinical trials for adjuvant therapy/Add on therapy may be conducted on Unani drugs in COVID 19 patients. Presently Central Council for Research in Unani Medicine (CCRUM) under Ministry of AYUSH, Government of India has initiated Population based Prospective Study on effectiveness and outcomes of Unani Medicine prophylactic interventions on population at risk of COVID-19.

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