Implications of Unani medicine in the management of Covid-19: An overview

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Abstract
The severe acute respiratory syndrome (SARS) coronavirus-2 is a novel coronavirus belonging to the family Coronaviridae and is now known to be responsible for the outbreak of a series of recent acute atypical respiratory infections originating in Wuhan, China in early December 2019. The disease caused by this virus, termed coronavirus disease 19 or simply COVID-19, has now spread globally with increasing morbidity and mortality among all populations. While going through Unani literature there is no direct description in about coronavirus in general and in particular coronavirus disease 2019 (COVID-19), but Amraz-e-Waba is used. It is an umbrella term which is used in Unani medicine for all types of epidemics but the clinical features of COVID-19 resemble with those of Nazla-e-Wabaiya, a type of Amraze-Waba (epidemic disease). As per Unani classical wisdom, improving immunity with immune boosters is one of the key approaches for prevention of disease and maintenance of health. Therefore, a strategy to enhance immunity and provide symptomatic relief in upper respiratory tract infection is advocated.

Keywords: coronavirus, unani system of medicine, Amraze waba, Nazla-e-Wabaiya

Introduction
The severe acute respiratory syndrome (SARS) coronavirus-2 is a novel coronavirus belonging to the family Coronaviridae and is now known to be responsible for the outbreak of a series of recent acute atypical respiratory infections originating in Wuhan, China in early December 2019. The disease caused by this virus, termed coronavirus disease 19 or simply COVID-19, has rapidly spread throughout the world at an alarming pace and has been declared a pandemic by the WHO on March 11, 2020 [1, 2]. COVID-19 has now spread globally with increasing morbidity and mortality among all populations [3]. Over 39 million people have been infected with Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) and over 1 million have died from Coronavirus Disease (COVID-19) since December 2019 [3].

Concept of epidemic disease (Amraze-Waba) in Unani Medicine
Epidemic referred to as Waba in Unani medicine, are thought to occur if such ajsam-e-khabitha (contagions) find a place in air and water. According to Ibn-e-Sina (980-1035 AD), air and water are contaminated only after admixture of ajsam-e-khabitha. He also stated that epidemics spread from one person to another and from and one city to another like a message.

While going through Unani literature there is no direct description is about coronavirus in general and in particular coronavirus disease 2019 (COVID-19), but Amraze-Waba is used. It is an umbrella term which is used in Unani medicine for all types of epidemics (smallpox, measles, plague, influenza, Nipaha, Ebola, Zika, and 2019 novel coronavirus, etc.) but the clinical features of COVID-19 resemble with those of Nazla-e-Wabaiya, a type of Amraze-Waba (epidemic disease) which was well described many years ago in Unani text such as high-grade fever, headache, nausea and vomiting, running nose, dry cough, respiratory distress, alternate and small pulse, asthenia, foul smell from breath, insomnia, frothy stool, syncope, coldness in both upper and lower extremities, etc. [4, 5]. Although the majority of people with COVID-19 have uncomplicated or mild illness (81%), some will develop severe illness requiring oxygen therapy (14%) and approximately 5% will require intensive care unit treatment. Of those critically ill, most will require mechanical ventilation [6].

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Fate of Covid 19 in context of Unani system of medicine.

Unani Medicine (Tibb) is a medical system that deals with the management of health and disease. It provides preventive, promotive, curative and rehabilitative healthcare with holistic approach. Unani Medicine believes that Medicatrix Naturae (Tabiyyat Mudabbira’-i Badan) is the supreme power, which controls all the physiological functions of the body, provides resistance against diseases and helps in healing naturally. It is said that the real physician is the Tabi’at and the task of the physician is only to help it [7]. If the power of tabiat is strong, then a person does not suffer a disease easily. If this power weakens, imbalance in humoral composition is bound to occur and this will lead to disease.

1. **Bohran Jayyad Taam**: It is the type of Bohran in which physic or Tabbiyat is completely dominant on disease. It can be correlated with asymptomatic case.

2. **Bohran Jayyad Naqis**: It is the type of Bohran in which physic or Tabbiyat is partially or incompletely dominant on disease and can be correlated to as mild case of Covid 19.

3. **Bohran Raddi Naqis**: It is the type of Bohran in which disease is partially or incompletely dominant on Tabbiyat and can be correlated to as moderate case of Covid 19.

4. **Bohran Raddi Taam**: It is the type of Bohran in which disease is completely dominant on Tabbiyat and in most of cases it will lead to death. It can be correlated with severe case of Covid 19 [9].

The present control strategies of the disease include the reduction of secondary infections by early diagnosis and isolation of cases, providing optimal care to infected patients, and the development of effective diagnostic, preventive and therapeutic strategies, including vaccines (WHO, 2020). In the absence of any proven treatment option, many drugs are under investigation to control this disease with a potentially fatal outcome. Yet, as of now, there are no specific antiviral drugs or vaccines verified to be against SARS-CoV –2, hence the emphasis is being laid on preventive measures and symptomatic treatment [9]. Despite great efforts, there is no treatment of this disease. However, prevention and management are the best options [9].

Unani Medicine recognizes the influence of surroundings and ecological conditions on the state of health of human beings. Apart from treating disease conditions, Unani Medicine regards great emphasis on the prevention of disease and promotion of existing health through principles of six essential factors (Asbab-e-Sitta Zarooriyah) of life. It lays great emphasis on the maintenance of a proper ecological balance and on keeping air, water and food free from all possible pollution and pathogens. An eminent Unani physician Galen (129-200 CE) postulated that certain diseases caused by pollutants tend to be carried by wind and hence, do disseminate faster; these enter human body through respiratory route.

As per Unani classical wisdom, improving immunity with immune boosters is one of the key approaches for prevention of disease and maintenance of health. Therefore, a strategy to enhance immunity and provide symptomatic relief in upper respiratory tract infection is advocated [10].

**Usaole ilaj (Principle of treatment)**

1. Screen and isolate all patients with suspected COVID-19 at the first point of contact with the health care system and keep away healthy people from diseases patients.

2. Removal of cause. Epidemic containment measures mentioned by Unani scholars can be broadly divided into cause centric and host-centric measures and these are applicable at the environment and individual level, respectively.

   a. At environmental level measures are aimed to eliminate the pathogens present in the environment through disinfectant and using of certain herbal drugs as fumigants or sprays.

   b. At individual level suggested measures are aimed to strengthen the host defense and symptoms specific drugs [10].

   1. Health Promotion, immune modulation by health-protecting drugs (Muqawwiyat).

   2. Use of exhilarants and cardiac tonics, antidotes for protection of vital organs.


4. To correct indigestion and constipation.

Older patients and those with comorbidities, such as cardiovascular disease and diabetes mellitus, have increased risk of severe disease and mortality. They may present with mild symptoms but have high risk of deterioration and should be admitted to a designated unit for close monitoring.

**Unani Management of Covid 19**

Its management has been two pronged in Unani medicine. One is to revert the air quality to a pure form, i.e., to decontaminate the places of contact of the virus and the other is to manage the person who has contracted the disease.

**Preventive measure**

1. Maintain social distancing at least 1 meter distance.

2. Frequent washing of hands with soap, water and use of alcohol-based sanitizer for at least 20 second.

3. Avoid touching eyes, nose and mouth.

4. Use of face mask

5. Practice good respiratory hygiene and etiquettes.


7. Isolation of vulnerable population like elderly people, pregnant women and people having co-morbid conditions such as hypertension and diabetes mellitus.

8. Fumigation (Bakhoor) of the house at frequent intervals with combination of Sandal (Santalum album) and Kafoor (Cinnamomum camphora).

**Unani Modalities**

**Dietotherapy**: Diet therapy has an important role in the prevention of disease rather than its control. Unani physicians give prime importance to diet, in both health and disease.
Diet recommended for boosting immunity

- Ma’ul Sha’eer
- Neem Brahsht Anda
- Chicken soup
- Almonds, Walnut etc
- It is also advised to consume citrus and sour fruits, especially grapes, apples, lemon, etc. [13] Oxymel prepared with Arq-e-Gulab is believed to provide effective protection during epidemics [9, 14].

Diet restricted

- The diet which is not easily digestible, hot, spicy and oily diet should be avoided.
- Sweets, alcohol, and meat of fish should be avoided [8].

Ilaj-bit-tadbeer (Regimenal therapy)

It is a method through which preservation of general health care and to enhance immunity which can be attained through the modification in Ashab-e-sitta Zarooriya.

a. Air (Hawa): Air should be free from physical, chemical and biological pollutants / contaminants. Purify the air by Fumigation (Bakhur) of the house at frequent intervals with combination of Sandal (Santalum album) and Kafur (Cinnamomum camphora). Avoid staying in air conditioner for long and maintain room temperature.

b. Food and Drink (Makul-o-Mashrub): Nutritive and easily digestible food should be taken. Use of seasonal fruits and vegetables should be preferred.

c. Take adequate sleep at least for 8 hour.

d. To maintain good health and enhancement of immunity, the body requires both exercise and rest. So, do moderate exercises daily.

e. Try to minimize stress because stress can lead to lowered immunity and make more prone to illness.

f. For maintaining good health, UM believed that isitaughr and ihtibus of substances is very important, so proper and normal functioning of excretory processes must be ensured.

Certain non-essential factors (Ashab Ghayr Zaruriya) e.g. Massage (Dalk) and Turkish Bath (Hammam) may also help to increase immunity [15].

Pharmacotherapy: Single and compound Unani drugs mentioned here under, may prove to be beneficial and can be used for possible immune-boosting / symptomatic relief in upper respiratory tract infections.

Prophylactic approach through Unani Single Drugs

Begh dana (Cydonia oblonga): Antioxidant, immunomodulator, antiallergic and anti- influenza. (Dose is 3-5 gm)

Unnab (Zizyphus jujuba): Anti-influenza, immunomodulator and antioxidant. (10) (Dose is 5 pcs.)

apistan (Cordia myxa): Immunomodulator, tracheal smooth muscle relaxant and anti-oxidant. (Dose is 9 pcs.)

Karanjwa (Caesalpinia bonducella): Antipyretic, antimicrobial, anti inflammatory and immunomodulator. (Dose is 3 to 5 gm) [7]

Unani Formulation-for symptomatic treatment

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Unani formulation [7, 14]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry cough</td>
<td>Habbe surfa, khameera banafshan, laooq sapistan, Diyaqqooza</td>
</tr>
<tr>
<td>Fever</td>
<td>Habbe ikheer bukar, Habbe mubarak,</td>
</tr>
<tr>
<td>Sore throat</td>
<td>Sharbate Toot siyah, Laoqoq sapistan khyarshambari</td>
</tr>
<tr>
<td>Difficulty in breathing</td>
<td>Laoqoq katan, Arq Ajeeb(inhalation)</td>
</tr>
</tbody>
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Unani Immunity Enhancers: A large number of drugs have been prescribed in Unani Medicine in which certain lead on immuno-modulatory effects have been reported.

Single drugs

Zanjabil / Adrak (Zingiber officinale), Asgandh (Withania somnifera), Amla (Emblica officinalis), Gilo (Tinospora cordifolia), Sir / Lahsun (Allium sativum), Anjeer (Ficus carica), Zafraan (Crocus sativus), Shivinii / Kalonji (Nigella sativa), Zard Chob / Haldi (Curcuma longa), Zaitoon (Olea europeae), Rehan (Ocimum sanctum), Rumnan (Punica granatum), Badranjboya (Mellisa officinalis), Brahmi (Bacopa monnieri), Badam Shirin (Prunus amygdalus), Sahajna (Moringa olfera), Gurmar (Gymnema sylvestre), Sibtr / Gheekawar (Aloe vera), Musli Safaid (Chlorophyllum borivillianum), Asl-us -Soos / Mulethi (Glycyrrhiza glabra), Halela (Terminalia chebula) [15]

Compound drugs

Khameera Marwareed: 3-5 g twice a day, Khamira Gaozaban Ambri Jadwar Ud Salib Wala, Khamira Abresham Hakim Arshad Wala, Tiryaq-e-Arba, Tiryaq waba (not recommended in diabetics patients)

Asgandh (Safoof): 5 g and make safoof of Zafran, Sibtr, Murmaki (in case of diabetic patients).

Local Application: In case of respiratory discomfort or chest pain local application of Roghan-e-Babuna Sada on chest is advocated.

Inhalation: Arq-e-Ajeeb 2-5 drops [7].

Possible Treatment

Unani scholars have prescribed several single drugs as well as compound formulations for the prevention and treatment of infectious diseases in general. They have emphasized more on the use of certain drugs which are known to improve host immunity during the outbreak of epidemics, endemics and pandemics.

Ismail Jurjani: (1041-1136 CE) mentioned that use of Tiryaqas during epidemics strengthens the heart and keeps the body faculties strong [7].

Tiryaq-e-Wabai: It is based on three ingredients which is especially used during epidemic condition and described by renowned Unani scholars Rhazes, Majusi, Avicenna, Ismail Jorjani, Hakim Azam Khan, etc. [8, 14, 17]
In Asymptomatic Unexposed group: For maintenance of health, Unani medicine specially emphasized on the modulation of six essential factors (Asbab-e-Sitta Zarooriya), i.e., air, food and drink, bodily movement and repose, psychic movement and repose, sleep and wakefulness, and evacuation and retention, and also use of Tiryaq-e-Wabai as prophylaxis.

In Asymptomatic Exposed cases: To enhance immunity through modulation in Asbabe sitta zarooriya and Unani immunomodulator like Khameera Marwareed, Safafoo Asghand, Tiryaq wabai etc.

Symptomatic mild and moderate cases: Keep patients on observation and for relieving symptoms give Dafe Sual (cough suppressant), Mulatiff (Demulcent), Muhallilie aurum (Anti-inflammatory), Dafe humma (Anti-pyretic), immunomodulators along with above mentioned regimens in asymptomatic case.

a. Take Khameera Marwareed 3-5 g in morning and Tiryaq-e Arba in the dose of 3-5 gm with lukewarm water in evening for enhancing immunity (Not recommended for diabetics). Diabetics may take Safafoo Asghand (powder of Withania somnifera) in a dose of 5 gm daily.

b. Prepare decoction by boiling Behidana (Cydonia oblonga) (3 gm), Unabb (Zizyphus jujuba) (5 pcs.), Sapistan (Cordia myxa) (9 pcs.) in 250 ml water until it reduces to half. Sprinkle khaksi (Sisymbrium adenophorum) over it. Take sips as and when required.

c. AYUSH Joshanda: Prepare decoction by boiling Raiahn / Tulsi (Ocimum sanctum) leaves 4 parts, Dar Chini (Cinnamomum zeylanicum) stem bark 2 parts, Zanjabeel (Zingiber officinale) rhizome 2 parts, Filfil Siyah / Kali Mirch (Piper nigrum) fruit 1 part in 250 ml water until it reduces to half. Add jaggery or lemon juice into decoction for taste and take sips in evening or as and when required [15].

d. Gargle with decoction of barge toot (5), maghZloos khyarshambar (10-20gm) in case of sorethroat.

e. If patient having problem in difficulty in breathing then advised of Laoeq katan (6gm), inhalation of Arq ajeeb (2-5 drops) [7].

f. In case of chest pain local application of Roghan-e-Babuna Sada or Qairooiti on chest is advocated [7].

Conclusion
It can be concluded that as per Unani classical wisdom, improving immunity with immune boosters is one of the key approaches for prevention of disease and maintenance of health. Therefore, a strategy to enhance immunity and provide symptomatic relief in upper respiratory tract infection is advocated.

References
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